INTERNATIONAL COUNCIL OF WOMEN
STANDING COMMITTEE ON
PUBLIC HEALTH

PREVENTION OF TUBERCULOSIS

AND HOW IT CAN BE AFFECTED BY THE CARE AND ISOLATION OF ADVANCED CASES

EDITED
UNDER THE SUPERVISION OF
THE COUNTESS OF ABERDEEN
PRESIDENT OF THE INTERNATIONAL COUNCIL OF WOMEN AND CONVENER OF THE INTERNATIONAL STANDING COMMITTEE ON PUBLIC HEALTH

G. BRAUNSCHE HOFBUCHDRUCKEREI UND VERLAG
KARLSRUHE i. B.

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1913

CONTENTS

FOREWORD

The International Anti-tuberculosis Campaign finds itself confronted in all countries by the problem of the treatment of the advanced cases. When the Campaign is first initiated in any country the prevailing impulse is to concentrate on the care and treatment of the early and curable cases. But very soon the study of the history of these cases teaches that in the large majority they have been infected by contact with persons in an advanced stage of the disease, and by living under conditions of insanitary overcrowding and poverty under which the infection is most easily spread.

It becomes clear therefore that one of the most imperative duties devolving on those who are conducting the campaign, is to devise schemes whereby patients who are a danger to their families and the community may be segregated, and at the same time be carefully provided for and tended. The difficulties which confront the framers of such schemes are very great. We have to face the natural unwillingness of the patients to leave home, the shrinking of the public to see compulsion applied under such circumstances, the expense involved, and the difficulty of proving that the isolation aimed at really succeeds in checking the spread of the disease.

The information and statistics gathered together in this little book by the Public Health Committee of the International Council of Women are published with the view of giving the experience of different countries on these points, and in the hope that the conclusions which must inevitably be the result of such study, will hasten the adoption of measures which will both promote the comfort of the sufferers, and greatly expedite the stamping out of the disease.

The plans which can be adopted, divide themselves naturally under two heads: —

I. Isolation and treatment in institutions especially suited for advanced cases.

II. Arrangements in the patients' own homes whereby danger of infection to others is reduced to a minimum.

Under the *first heading* we must include arrangements which will induce patients voluntarily to make use of the institutions provided for them, and the general consensus of opinion gathered in these reports is that it is desirable that these hospitals for advanced cases should not be too large, that they should be fairly numerous and accessible to the patients' friends, that they should be home-like, with opportunities of amusement and recreation, and that they should not be labelled in a way to preclude the hope of recovery. If these points are attended to, it appears that there is an ever increasing disposition on the part of the majority of patients to avail themselves of the shelter of such Homes.

On the other hand it must be remembered that there are a certain number of patients in every community whose illness has been largely the result of intemperance and bad habits, and who cannot be induced either to enter an institution, or to observe habits of cleanliness and common precaution against infecting others, and it would seem necessary that in such cases the community must be given the power to protect itself against the very serious dangers involved by all infectious diseases. It will be seen in this little volume that Enforced Isolation has been adopted under these circumstances in a few countries. It has been carried out for some time in the City of New York, and the State of New Jersey has recently passed very stringent legislation giving compulsory powers to local authorities for the purpose of isolating infectious cases.

The other alternative i. e. *the treatment of Advanced Cases in their own homes under adequate control* has met with varying success, depending on:

I. The funds available to provide the separate rooms and beds required.

II. The willingness of the patient and his family to carry out the instructions of the doctor.

III. The adequacy of the supervision exercised by the visiting Nurse, or other Visitor in charge.

When these necessities can be met, there seems no reason why home treatment should not be adopted with excellent results, and without the painful necessity of breaking up families.

Two special methods for exercising supervision of cases in their own homes are being tried in the United States. One of these is to establish a Home Hospital in a block of suitably arranged tenements, hired by a philanthropic Association for the purpose, where families who have one or more members

suffering from tuberculosis can live together, and are provided with all necessary treatment, but under hospital regulations; and the other being the Class Method, where patients living at home belong to a Tuberculosis Class, attending weekly when able, and always reporting regularly, receiving marks, and encouraged to keep the rules laid down by the doctor teacher, by emulation, and by the desire to graduate to a higher position in the class. The constant supervision of trained tactful nurses is involved in all methods of home treatment, and indeed the information collected by our Public Health Committee from all countries, impresses us with the necessity of urging everywhere the adoption of a more complete system of home visitation by trained nurses under the supervision of doctors and Care Committees, as the most adequate method of following up and caring for tuberculosis patients and their families at home.

ISHBEL ABERDEEN
PRESIDENT I.C.W.

INTRODUCTION

The Standing Committee on Public Health of the International Council of Women decided at their Meeting in Stockholm, September, 1911, to make an enquiry as to how different countries endeavour to prevent the spread of Tuberculosis through infection transmitted by advanced cases. According to this decision the Convener and Secretary sent out the following questions: —

1. What is the death-rate in your country and the annual number of the deaths from

(a) Pulmonary Tuberculosis (Phthisis)
(b) Tuberculosis of all forms.

(Please give official figures if possible, and state if official figures are published every year. It would be of advantage if you could quote for a period of ten years.)

2. How does the death-rate from Tuberculosis compare with the death-rate from other diseases?

3. Please give the incidence of the Tuberculosis death-rate as it affects sexes and different ages?

4. Have you any statistics showing how much invalidity and inability to work exists in your country through tuberculosis?

5. Have you any special laws with regard to tuberculosis and to persons suffering therefrom?

6. Is there any distinction made between early cases and advanced cases in regard to the institutions provided, and if so is there any recognised description of what is considered an advanced case?

7. What means are taken to isolate advanced cases in your country by

(a) National Legislation
(b) Municipal Legislation
(c) Voluntary Associations or Institutions?

8. Is there any difficulty in persuading advanced cases to go to such institutions as may be provided for them, and if there is how do you endeavour to overcome it?

9. Are there any special methods employed to educate advanced cases living at home regarding the means they should use to protect the other members of their families against infection, such as

1. Visiting Nurses.
2. Health Visitors.
3. Tuberculosis Classes
4. Instruction at Dispensaries or other Institutions.

10. Are any measures taken to protect the children or other dependents of patients against infection?

11. Is any provision made for the maintenance of dependents if the bread-winner is taken away to hospital, or while he or she is unable to work?

12. If the advanced cases are allowed to remain at home, what measures are taken to provide them with separate rooms, separate beds, and necessary nourishment?

13. What measures have been taken to fight against the exaggerated fear of tuberculosis, which often hinders necessary measures being taken?

14. Can you give any figures showing the cost of treating
    (a) curable cases
    (b) hopeless cases?

15. Have you tried any special treatment for advanced cases?

16. Is there a system of National Insurance affecting tuberculosis patients? If so, state in detail how it works and how it is financed.

The greater number of the replies received to questions 1, 2 and 3, have been tabulated on a uniform plan as here given, but in several instances it was not found possible to do more than give the particulars as stated, often with much interesting detail, in the reports sent in by the members of the Standing Committee for Public Health responsible for them. Their remarks and illustrations have been included as far as permitted by the exigencies of space. The sources from which the information given in this pamphlet has been derived are indicated in an appendix.

QUESTION I

What is the death-rate in your country and the annual number of the deaths from

(a) Pulmonary Tuberculosis

(b) Tuberculosis of all forms?

GERMANY

Year	Phthisis		Tuberculosis all forms	
	Number of Deaths	Ratio per 10,000 persons living	Number of Deaths	Ratio per 10,000 persons living
1900	—	20.40	—	22.20
1901	—	19.00	—	20.90
1902	—	18.50	—	20.40
1903	—	18.40	—	20.50
1904	—	18.10	—	20.20
1905	—	17.80	—	20.30
1906	—	16.30	—	18.80
1907	—	15.90	—	18.30
1908	—	15.10	—	17.50
1909	—	14.44	—	16.81
1910	—	—	—	—

SWEDEN

Year	Pulmonary Tuberculosis		Tuberculosis all forms	
	Number of Deaths	Ratio per 10,000 persons living	Annual number of deaths	Ratio per 10,000 persons living
1901	9930	19.2	11 143	21.5
1902	9666	18.6	10 925	21.0
1903	9349	17.9	10 614	20.3
1904	9997	19.0	11 295	21.5
1905	9818	18.5	11 033	20.8
1906	9339	17.5	10 869	20.4
1907	9275	17.2	10 860	20.4
1908	9149	16.9	10 743	20.0
1909	8794	16.0	10 201	18.6

ENGLAND AND WALES — SCOTLAND

Year	Phthisis		Tuberculosis (all forms)		Phthisis and Tuberculosis	
	Number of Deaths	Ratio per 10,000 persons living	Number of Deaths	Ratio per 10,000 persons living	Number of Deaths	Ratio per 10,000 persons living
1900	42 987	13.33	61 356	19.02	—	—
1901	41 224	12.64	58 930	18.07	9 911	22.00
1902	40 671	12.33	57 396	17.41	9 536	21.00
1903	40 132	12.03	58 107	17.42	9 726	21.00
1904	41 851	12.36	60 205	17.77	10 158	24.00
1905	38 950	11.40	55 759	16.32	9 619	20.00
1906	39 746	11.50	56 841	16.44	9 999	21.00
1907	39 839	11.40	56 101	16.05	10 070	21.00
1908	39 499	11.15	56 080	15.83	9 642	20.00
1909	38 639	10.91	54 425	15.37	9 274	19.70
1910	36 334	10.15	51 317	14.34	8 517	17.98

IRELAND*

Year	Phthisis		Tuberculosis (all forms)	
	Number of Deaths	Ratio per 10,000 persons living	Number of Deaths	Ratio per 10,000 persons living
1900	10 076	22.55	12 859	28.78
1901	9 549	21.48	12 335	27.75
1902	9 400	21.21	11 837	26.71
1903	9 559	21.66	12 180	27.60
1904	9 833	22.34	12 694	28.84
1905	9 216	20.99	11 882	27.07
1906	8 933	20.36	11 756	26.79
1907	8 828	20.17	11 679	26.69
1908	8 511	19.47	11 293	25.83
1909	8 051	18.42	10 594	24.25
1910	7 527	17.23	10 016	22.93
1911	7 584	17.34	9 623	22.00

* These figures are kindly supplied by the Registrar General for Ireland.

DENMARK

Year	Phthisis		Tuberculosis all forms	
	Number of Deaths	Ratio per 10,000 persons living	Number of Deaths	Ratio per 10,000 persons living
1900	—	—	—	—
1901	—	—	—	—
1902	—	—	—	—
1903	—	—	—	—
1904	—	—	—	—
1905	—	—	—	—
1906	—	—	—	—
1907	—	—	—	—
1908	1720	16.14	1901	17.83
1909	1228	11.38	1453	13.36
1910	1190	10.86	1381	12.60

NETHERLANDS

Year	Phthisis		Tuberculosis all forms	
	Number of Deaths	Ratio per 10,000 persons living	Number of Deaths	Ratio per 10,000 persons living
1900	—	—	—	—
1901	7171	13.73	10119	19.37
1902	7020	13.25	9928	18.72
1903	7117	13.21	10164	18.86
1904	7081	12.94	10080	18.42
1905	7533	13.57	9954	17.93
1906	7531	13.37	10018	17.79
1907	7403	12.97	9763	17.28
1908	6917	11.96	9359	16.28
1909	7106	12.26	9456	16.14
1910	6936	11.78	9167	15.53

AUSTRALIA

Year	Phthisis		Tuberculosis all forms	
	Number of Deaths	Ratio per 10,000 persons living	Number of Deaths	Ratio per 10,000 persons living
NEW SOUTH WALES				
1910	—	6.40	—	7.70
TASMANIA				
1901	—	—	141	8.10
1902	—	—	170	9.70
1903	22	1.20	163	9.20
1904	24	1.40	173	9.70
1905	34	1.90	177	9.90
1906	46	2.60	162	8.90
1907	38	2.10	157	8.80
1908	28	1.50	180	9.50
1909	21	1.20	163	9.10
1910	46	2.39	169	8.78
VICTORIA				
1901	—	—	—	—
1902	—	—	—	—
1903	—	—	—	—
1904	—	—	—	—
1905	—	10.19	—	—
1906	—	8.88	—	—
1907	—	9.58	—	—
1908	—	9.55	—	—
1909	—	8.48	—	—
1910	1078	8.30	1306	10.06

FRANCE

Year	Phthisis and Tuberculosis		Year	Phthisis and Tuberculosis	
	Number of Deaths	Ratio per 10,000 persons living		Number of Deaths	Ratio per 10,000 persons living
1901	—	—	1906	87 091	22.1
1902	—	—	1907	91 048	23.0
1903	—	—	1908	88 412	22.5
1904	—	—	1909	—	—
1905	—	—	1910	—	—

ARGENTINA

Year	Phthisis and Tuberculosis	
	Number of Deaths	Ratio per 10,000 persons living
—	4150	15.90

NORWAY

Year	Phthisis		Tuberculosis	
	Number of Deaths	Ratio per 10,000 persons living	Number of Deaths	Ratio per 10,000 persons living
1900	4888	—	6374	—
1901	4337	—	5672	—
1902	4279	—	5655	—
1903	4488	—	5865	—
1904	4489	—	5787	—
1905	4625	—	5938	—
1906	4639	—	5914	—
1907	4656	—	5934	—
1908	4376	—	5672	—
1909	3997	—	5172	—

GREECE

Year	Phthisis		Tuberculosis	
	Number of Deaths	Ratio per 10,000 persons living	Number of Deaths	Ratio per 10,000 persons living
1902	10873	33.90	14899	34.09

BELGRADE (Servia)

Year	Phthisis		Tuberculosis	
	Number of Deaths	Ratio per 10,000 persons living	Number of Deaths	Ratio per 10,000 persons living
1901	519	—	624	—
1902	527	—	676	—
1903	501	—	632	—
1904	572	—	675	—
1905	621	—	760	—
1906	570	—	720	—
1907	589	—	699	—
1908	556	—	680	—
1909	612	—	757	—
1910	575	63.45	714	78.80

FINLAND

Average death-rate per 10,000 persons from 1896—1905

28.00

RUSSIA

Year	Phthisis		Tuberculosis	
	Number of Deaths	Ratio per 10,000 persons living	Number of Deaths	Ratio per 10,000 persons living
1900	—	—	—	—
1901	—	—	—	—
1902	—	—	—	—
1903	—	—	—	—
1904	—	—	—	—
1905	—	25.30	—	29.80
1906	—	25.10	—	30.50
1907	—	25.90	—	31.40
1908	—	26.50	—	31.40
1909	—	26.20	—	31.40

QUESTION II

How does the death-rate from Tuberculosis compare with the death-rate from other diseases?

(The rates are calculated per 10,000 living persons)

	Germany 1908	England and Wales 1910	Ireland 1911	Denmark 1910	Holland 1910	New South Wales (No year given)	Tasmania 1910	Victoria 1910	Finland 1896	Russia Av. 1905—1909	Greece 1899—1910
General D. R.	180.5	134.00	165.67	135.08	135.57	97.50	110.30	103.43	184.00	—	—
Phthisis	15.10	11.15	17.34	10.86	11.78	6.40	12.39	10.78	27.10	25.90	33.90
Tuberculosis (all forms)	17.50	15.85	22.00	12.60	15.53	7.70	8.78	8.30	—	30.80	34.09
Cancer	* 8.45	—	8.19	—	10.64	—	6.39	8.32	—	7.70	—
Heart Disease	—	—	7.47	—	7.61	—	11.33	13.94	—	—	—
Diphtheria	2.40	1.20	0.87	—	—	—	0.80	—	—	13.40	19.30
Typhoid Fever	** 0.51	0.50	0.81	—	—	—	2.10	—	—	—	5.85
Diarrhoea	—	2.90	§ 5.63	—	—	—	1.40	—	—	—	—
Gastro-Enteritis	19.20	—	—	—	—	—	—	9.18	—	—	—
Old Age	—	—	20.32	—	—	—	—	9.82	—	—	—
Bronchitis	—	—	14.90	—	5.72	—	—	—	—	—	—
Pneumonia	14.41	—	8.93	—	7.20	—	3.90	6.58	—	—	—
Malaria	—	—	0.01	—	—	—	—	—	—	—	14.60
Diseases of Respiratory System	27.40	—	† 17.40	—	—	—	—	—	—	30.20	—
Diseases of Nervous System	—	—	14.19	—	—	—	—	—	—	16.00	—
Diseases of Circulatory System	—	—	0.91	—	—	—	—	—	—	—	—

*) 1909. **) In cities with more than 15 000 inhabitants. §) Including deaths from Enteritis and Gastro-Enteritis of children under 2 years of age. †) Exclusive of deaths from Pneumonia but inclusive of deaths from Bronchitis.

Tuberculosis was responsible for 10.5 per cent of the mortality from all causes *in England and Wales* (in 1909), [72nd. Annual Report Registrar-General of Births, Marriages and Deaths (1909). p. LXXII. 1.] **Phthisis** accounted for 71 per cent of the total Tuberculosis mortality.

In *Scotland*, in 1909, the deaths from the principal infectious diseases, namely smallpox, measles, scarlet fever, influenza, whooping cough, diphtheria, and "fevers", amounted to 10.5 per 10,000, and of those from phthisis to 12.8 per 10,000, and from all Tubercular diseases to 19.8.

Ireland: — The deaths from the principal epidemic diseases, inclusive of influenza, and excluding diarrhoea, in the year 1911, corresponded to a rate of 7.5 per 10 000. In that year the death rate for Pulmonary Tuberculosis was 17.3, and for All Forms of Tuberculosis it was 22.0 per 10,000 deaths. The corresponding rates in 1910 were, for epidemic diseases 9.9 per 10,000, for pulmonary tuberculosis 17.2 per 10,000, and **for** all forms of tuberculous disease 22.9 per 10,000, and in 1909 the corresponding rates were 8.7 per 10,000; 18.4 per 10,000; and 24.2 per 10,000 of all deaths registered in Ireland during that year.

In *Norway* in 1909, the actual number of deaths was 27060. Of these 3,997 were from Phthisis, or 51.72 % of the total Tuberculosis mortality.

In *Belgrade* (Servia) in 1908 with 2,088 deaths, 575 were from Phthisis, 714 from Tuberculosis in all forms, 67 from cancer, 95 from gastro-enteritis, 66 from old age, 235 from diseases of the respiratory organs, 266 from diseases of the nervous system, and 178 from those of the circulatory system.

In *Cape Province* (S. Africa) in 1908, out of a total of 10,684 deaths, 1.787 were from Tuberculosis in all forms.

The following table shows the percentage of deaths from **Phthisis** and **Tuberculosis** on deaths from all causes in England, Wales, Scotland and Ireland from the year 1900 to 1910.

ENGLAND AND WALES

Table showing the per-centage of deaths from **Phthisis** and **Tuberculosis** on **deaths from All Causes**

Year	Deaths from All Causes	Deaths from Phthisis	% on Col. 2	Deaths from Tuber-culosis	% on Col. 2	Total deaths Cols. 3 and 5	% on Col. 2
1900	587,830	42,987	7·31	61,356	10.44	104,343	17·75
1901	551,585	41,224	7·47	58,930	10.68	—	—
1902	535,538	40,671	7·59	57,396	10.71	—	—
1903	514,628	40,132	7·79	60,205	11.29	—	—
1904	549,784	41,851	7·61	55,759	10.95	—	—
1905	520,031	38,950	7·50	56,841	10.72	—	—
1906	531,281	39,746	7·48	56,101	10.70	—	—
1907	524,221	39,839	7·60	56,080	10.70	—	—
1908	520,456	39,499	7·59	—	10.77	—	—
1909	—	—	—	—	—	—	—
1910	—	—	—	—	—	—	—

SCOTLAND

Table showing the per-centage of deaths from **Phthisis** and **Tuberculosis** on **deaths from All Causes**

Year	Deaths from All Causes	Deaths from Phthisis and Tuber-culosis	% on Col. 2	% on Deaths from All Causes	% on Col. 2	Total deaths Cols. 3 and 5	% on Col. 2
1900	—	—	—	—	—	—	—
1901	80,103	9,911	—	12.37	—	—	—
1902	77,946	9,536	—	—	—	—	—
1903	75,973	9,726	—	—	—	—	—
1904	77,961	10,158	—	—	—	—	—
1905	74,526	9,619	—	—	—	—	—
1906	75,585	9,999	—	—	—	—	—
1907	77,267	10,070	—	—	—	—	—
1908	77,839	9,462	—	—	—	—	—
1909	74,632	9,274	—	—	—	—	—
1910	72,245	—	—	—	—	—	—

IRELAND*

Table showing the per-centage of deaths from **Phthisis** and **All Forms of Tuberculosis** on **deaths from All Causes**

Year	Deaths from All Causes	Deaths from Phthisis	% on Col. 2	Deaths from All Forms of Tuber-culosis	% on Col. 2
1900	87,606	10,076	11.50	12,859	14.68
1901	79,119	9,549	12.07	12,335	15.59
1902	77,676	9,400	12.10	11,837	15.24
1903	77,358	9,559	12.36	12,180	15.74
1904	79,513	9,833	12.37	12,694	15.96
1905	75,071	9,216	12.28	11,882	15.83
1906	74,427	8,933	12.00	11,756	15.80
1907	77,334	8,828	11.42	11,679	15.10
1908	76,891	8,511	11.07	11,293	14.69
1909	74,973	8,061	10.74	10,594	14.13
1910	74,894	7,527	10.05	10,016	13.37
1911	72,475	7,584	10.46	9,623	13.28

In *France* although statistics are published biennially by the Minister of the Interior, statistics for the rural districts are difficult to obtain with accuracy. At Paris, in 1908, 10,492 deaths were due to pulmonary Tuberculosis, 1,056 to tuberculous meningitis, and 914 to other tuberculous diseases. The total deaths from all causes were about 88,500.

About 10,000 consumptives die yearly in *Sweden* (population about 5,300,000). According to the official figures for 1901—1909, the death rate given in the per-centage of the total population is as follows: —

Death per mille from Tuberculosis, given in % of the total number of deaths	1901	1902	1903	1904	1905	1906	1907	1908	1909
	13.5	13.7	13.5	14.0	13.4	14.2	13.9	13.3	13.7

* The above figures are kindly furnished by the Registrar General for Ireland.

Dr. Bluhm supplies the following tables for **Germany**:

Year	Tuberculosis (all forms) per 10,000	Inflammation of the respiratory organs	Gastritis-Enteritis	Diphtheria and Croup
1894	25.4	28.3	28.4	13.0
1901	20.9	25.9	29.9	3.9
1908	17.5	24.7	19.2	2.4

Out of 100 cases of death, died of:

Year	Tuberculosis (all forms)	Inflammation of the respiratory organs	Gastritis-Enteritis	Diphtheria and Croup
1894	11.1	12.2	12.5	5.7
1901	10.1	12.4	14.3	1.8
1908	9.8	13.6	10.6	1.3

The remarkable lowering of the death-rate from Diphtheria is said to be due in the first place to the introduction of the Behring Heil Serum (Anti-diphtheritic serum) into thereapeutics. The decrease in the death-rate from Gastritis and Enteritis is in reality not so great, because before 1902 the so called atrophy (which Dr. Bluhm thinks means Infantile Diarrhoea or Enteritis) of children is included in the Statistics. The proportion of deaths from inflammatory diseases has risen in the same degree as those from Tuberculosis have sunk. But in the latter case the decline has not been really large.

It may be noted that there has been no death from Smallpox in *Scotland* since the year 1904, and that this much dreaded disease seems now to be a negligible quantity, as it finds no mention in any of the comparative returns here dealt with.

From a review of the *Irish* Statistics it appears that the last death from Smallpox was registered in the year 1907, in which year one death only was reported; there was no record of mortality from the disease in the year 1906, and in the year 1905 only 5 deaths from Smallpox were registered, following a mortality of 16 in 1904, and 40 deaths in 1903. In 1902 only one death was registered for the whole of Ireland.

QUESTIO

Please give the incidence of the Tuberculosi

		0—5		5—10		10—15		15—20	
		M.	F.	M.	F.	M.	F.	M.	F.
England and Wales (1909)	Phthisis	2.63	2.32	1.23	1.75	1.61	3.72	6.62	9.
Ireland (1911)	Phthisis	4.57	5.12	1.89	3.01	3.54	11.06	16.28	24.
	Tuberculosis a. f. .	22.24	19.96	7.07	9.64	8.70	16.26	20.15	29.
Tasmania (1910)	Phthisis	1	—	—	—	—	1	—	5
	Tuberculosis a. f. .	12	8	2	1	1	4	5	20
Cape Province (1908)	Tuberculosis . . .	15.5	15.2	35	44	33	42	58	8

		0—5		5—10		10—15		15—20	
Belgrade (Servia) (1910)	Tuberculosis a. f. .	47	43	12	16	10	11	34	4

		0—5		5—15		15—20		20—30	
Netherlands	Phthisis	12.40	10.10	2.70	4.40	11.40	15.60	22.30	20.
	Tuberculosis a. f. .	46.60	38.40	7.30	9.00	15.20	20.10	26.90	24.

		0—5		5—15		15—25		25—45	
Russia (Average 1905—10)	Phthisis	22.56	20.42	6.25	7.48	23.43	20.00	53.84	28
	Tuberculosis a. f. .	62.53	54.81	13.22	12.80	26.26	22.05	57.76	30

No information was received in answer to this question from New South Wales, Denmark, or Finland; with regard to *Victoria (Australia)* we are informed that the proportion of deaths of females under 20 years of age is twice as great as that of males for the same period; the death-rates of males aged 45 years and upwards are considerably greater than those of females for the same periods.

Ireland: -- In the year 1911 the rate for All Forms of Tuberculosis for males was 21.68 per 10,000 and for females 22.31 per 10,000. In the age period under 5 years the male rate was 22.24 and the female 19.96; in the next four quinquennial periods the female death rate largely exceeded that of the male. The succeeding periods, namely, 25—35 years, 35—45, 45—55, 55—65 and from the age of 65 years and upwards the death rate of the males exceeded that of the females.

I

ath-rate as it affects sexes and different ages

20—25		25—35		35—45		45—55		55—65		65 and upwards		
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
.15	11.13	18.59	14.23	23.67	14.30	26.71	12.72	23.94	10.25	13.85	6.98	per 10,000
70	32.93	33.23	31.77	27.41	26.56	20.49	17.60	18.30	12.50	6.80	4.31	
46	37.21	36.59	34.55	29.94	29.06	22.26	19.64	20.11	14.44	7.93	5.45	
1	6	4	7	4	5	2	3	3	2	1	1	Actual deaths
3	21	18	19	12	10	13	7	5	3	3	2	
93	115	84	136	266	196	95	63	45	30	30	23	Actual deaths

20—30		30—40		40—50		50—60		60—70		75 and upwards		
9	76	62	42	64	24	47	15	22	10	12	7	Actual deaths

30—40		40—50		50—65		65 and upwards		
60	20.70	18.44	17.50	20.00	14.40	20.80	16.60	rates per 10,000
90	24.10	21.10	20.20	23.20	16.80	25.00	19.60	

.5—65		65 and upwards		
02	28.83	75.30	41.49	rates per 10,000
85	31.03	82.28	43.91	

In *Germany* the Government has only issued separate figures with regard to the death-rate of both sexes from Tuberculosis since 1905. Out of 10,000 living there died of Pulmonary Tuberculosis from 1905—1906.

Years	0—1	0—15	15—30	30—60	60—70	Total
Males	16.8	5.2	18.4	28.9	37.5	17.8
Females . . .	14.3	6.7	21.6	21.2	22.9	16.2

From 1905 to 1908 the following figures are given:

	1905	1906	1907	1908
Males	18.6	17.1	16.7	16.2
Females . . .	16.9	15.6	15.1	14.5

Dr. Bluhm adds another table giving the share due to all forms of Tuberculosis in 100 cases of death, as follows: —

	1905	1906	1907	1908
Males	10.2	10.1	10.1	9.8
Females . . .	10.4	10.4	10.2	9.1

and says that in the kingdom of Prussia in spite of the great decrease in the deaths from Tuberculosis from 1900—1906, the share of Tuberculosis in the deaths of females has increased from 9.18 to 9.66 per cent, due to a greater number of cases between the ages of 10—30, and particularly between 15 and 20 years. Here there has been an increase from 43.90 to 48.34 per cent, whereas amongst the males a decrease of 0.67 per cent has taken place.

Dr. Bluhm attributes the lower death-rate in the first year of life to the well-known greater vitality of the female sex, and the increase between the ages of 1 to 15 to the greater influence of sexual development among females, to which between 15 and 20 is added the necessity of earning their living, and between 20 and 30 years the additional tax of motherhood. She adds that the number of women over 30 earning their living is much lower than among men, so that the injurious influence of work (especially industrial) occurs much more often among men than among women. All these facts should, in her opinion, not be overlooked by the women's movement.

We see that the Anti-Tuberculosis Campaign has not greatly affected those at an early age, where infection is chiefly spread in the homes of the parents.

This shows a final table of Deaths from Tuberculosis per 10,000 living at the different ages.

In age from Years	1893	1897	1901	1906
0—1	21.7	20.5	18.3	19.3
1—15 . . .	6.6	6.0	5.3	4.5
15—60 . . .	31.2	27.3	25.1	21.8
60 and upwards .	45.5	36.0	30.8	23.7

Dr. Bluhm considers that this points to the duty of preventing the spread of infection in families, chiefly by the isolation of advanced cases and by providing for children threatened with infection.

The return from *Sweden* states that: — As figures giving the death-rate for different sexes do not exist, the figures of observed cases of pulmonary tuberculosis in different sexes are quoted.

(a) Out of 100 cases of pulmonary tuberculosis
46.5 % were men, and
53.5 % „ women.

(b) Out of 100 cases of death:

among persons under 1 year of age 4.3 % are from Tuberculosis
„ „ from 1—15 years 22 „ „ „ „
„ „ „ 16—30 „ 53 „ „ „ „
„ „ „ 30—60 „ 25 „ „ „ „
„ „ over 60 „ 1.3 „ „ „ „

These figures were compiled in 1906, and no subsequent table has been made.

In *Greece:* "The highest rate of mortality is observed among males from the 30th to 40th year; among females from the 15th to 20th year. The lowest rate of mortality in both sexes is after the 70th year and before the 5th year. In women the mortality from 60 to 70 years is less than in men.

With reference to this question, the Registrar-General writing with regard to *England and Wales* says: — "In the quinqennium, 1851—5, the rates were the same in each sex (36.37 per 10,000), but in the four-year period 1906—1909, while the rate among males had fallen to 18.25 per 10,000, that among females had fallen to 13.67 per 10,000. In the case of phthisis . . . . the mortality among females did not fall below that of males till a later period (1866—1870) but since then the excess in decrease in female mortality has been more marked than in the case of tuberculosis generally, the death-rate from phthisis among females during the four years 1906—1909 being 29 per cent lower than among males . . . . There has been a general fall in England and Wales as a whole in phthisis mortality of each sex at age groups below 65 years, but above this age there has been a slight increase . . . . . The greatest proportional fall in mortality under this head appears to have occurred among children under 5 years of age. The greatest saving of life, therefore, can be shown to have occurred at ages 35 to 45 years.

In *Argentina,* from 15 to 60 years of age, it is stated that the deaths from Tuberculosis were: —

Males 25.8 %
Females 30.5 %

but among foreigners dying in the country there was a preponderance of males 17.2 men to 13. females.

Mrs. Ogilvie Gordon gives some interesting tables with regard to the proportion of deaths from tuberculosis to every 10,000 of the population of *Scotland* in 1909 as follows: —

Tuberculous Diseases	Both Sexes	Males	Females
Pulm. Tuberc. and Phthisis.	1.28	1.36	1.21
Tuberculous Meningitis	.27	.29	.26
Tuberc. Peritonitis and Tabes Mesenterica.	.21	.21	.22
Other Tuberculous Diseases.	.21	.22	.21

A. The following table shows the incidence of the tuberculosis death-rate as affecting sexes, and it may also be taken as an example of steady decrease of the tuberculosis death-rate in a Scottish city within the last half-century.

ABERDEEN

Death-rate from Tuberculosis, 1856—1910, per 10,000 of Population

Period	Pulmonary Tuberculosis			Other Tuberc. Diseases			All Tuberc. Diseases		
	Males	Fem-ales	Both Sexes	Males	Fem-ales	Both Sexes	Males	Fem-ales	Both Sexes
1856—1860	3.33	3.12	3.22	2.35	1.35	1.79	5.68	4.77	5.01
1861—1865	2.67	2.67	2.74	1.58	1.03	1.28	4.25	3.82	4.02
1866—1870	2.95	3.00	2.98	1.70	0.98	1.30	4.65	3.98	4.28
1871—1875	2.34	2.50	2.43	1.29	0.89	1.07	3.63	3.39	3.50
1876—1880	2.17	2.28	2.23	1.12	0.92	1.01	3.29	3.20	3.24
1881—1885	1.89	2.16	2.04	0.90	0.62	0.74	2.79	2.78	2.78
1886—1890	1.79	1.88	1.84	0.76	0.60	0.67	2.55	2.48	2.51
1891—1895	1.79	1.83	1.81	0.83	0.62	0.72	2.62	2.45	2.53
1896—1900	1.66	1.68	1.67	0.77	0.64	0.70	2.43	2.32	2.37
1901—1905	1.43	1.34	1.38	0.79	0.62	0.69	2.22	1.96	2.07
1906—1910	1.19	1.13	1.16	0.74	0.51	0.61	1.93	1.64	1.78

Dr. Bluhm's conclusions as regards the relation of sex to the mortality at the various age-periods are borne out by Dr. Matthew Hay, who summarises as follows for the City of Aberdeen. —

> "It is of interest to note that, at the "school" age period, girls have constantly suffered much more than boys from phthisis. In recent years nearly twice as many girls as boys have died of phthisis. Is this due in part to the larger amount of out-door play and exercise indulged in by boys? I think it is not unlikely, in view of the well-established beneficial effect of open-air in preventing or arresting phthisis.

"At the "adolescent" age-period, in 1866—70, more males than females died of phthisis: but in 1886—90, and still more in 1909, the excess of deaths among females is well marked.

"During 1909, at the ages of 5 to 25 years — which cover the "school" and "adolescent" periods — for every two deaths from phthisis among males there were three among females.

"At the age-period of 25—60 years the tables are turned, and men begin to die of phthisis more often than women. At ages above 60 years this difference continues, and in a very pronounced degree, so that, roughly, twice as many men as women die at these ages from phthisis. Probably the greater care that women usually take of themselves in protection from chills and colds, and their greater freedom from the effects of alcoholism, partly accounts for the lower death-rate at the later ages. Men also suffer more from the deleterious effects of certain occupations. There is also the probability that if predisposition is an important factor, as I believe it to be, some males that have, for the reasons suggested, escaped death from phthisis in boyhood and adolescence may survive to increase the proportion of predisposed males at later ages.

"As the total death-rate at all ages from phthisis is nearly equal for both sexes, and is, if anything, very slightly less for females than males, it follows that the higher mortality from phthisis in early life among females, although compensated for by a lower mortality in later years, produces a lower average age at death for all females dying from phthisis as compared with males." (Ref. 4b., p. 10.)

B. The Incidence as it affects different Ages

Statement, showing the rates represented by Deaths from Pulmonary Tuberculosis and other forms of Tuberculous Disease per 10,000 of the Population at certain Age-periods, in England and Wales, Scotland and Ireland, for the year 1910:—

	Pulmonary Tuberculosis				Other Forms of Tuberculous Disease		
Country	Under 5 Years	5–10 Years	10–15 Years	Country	Under 5 Years	5–10 Years	10–15 Years
England and Wales	2.87	1.26	2.60	England and Wales	18.88	4.55	2.85
Scotland	3.15	2.26	4.02	Scotland	29.12	7.82	4.79
Ireland	2.57	2.19	7.21	Ireland	19.19	7.22	6.35

For the year 1911, the following summary shows the number of deaths from tuberculous diseases at four periods of life in the eight selected towns of Scotland.

	0—5	5—25	25—65	65 etc.	Total
	Years				
Pulmonary Tuberculosis	74	588	1376	68	2106
Phthisis	3	21	24	—	48
Acute Phthisis / Acute Miliary Tuberculosis	20	21	8	1	50
Tuberculous Meningitis	352	114	22	—	488
Abdominal Tuberculosis	201	100	48	3	352
Tuberculosis of Spine	2	20	12	1	35
Tuberculosis of Joints	6	15	6	—	27
Tuberculosis of other organs / Disseminated Tuberculosis	132	109	92	7	340
Deaths from all causes at these four periods	9363	2851	10198	6431	28843

For the whole of *France* the maximum of deaths occurs between the ages of 20 and 39. Below the age of 18 the deaths of girls are double those of boys among the poorer children in the schools of great towns. From 18 onwards the deaths of males exceeds those of females up to the age of 45. After the age of 45 the deaths tend to become more equal between the two sexes, and at the age of 60 the death-rate is the same for men and for women.

A commission appointed by the Provincial Government of *Quebec* brings out many interesting points and reports the total death-rate from tuberculosis to be higher for women than for men.

QUESTION IV

Have you any statistics showing how much invalidity and inability to work exists in your country through tuberculosis?

The Annual Report for 1910 of 23 out of 31 Insurance boards (Landesversicherungsanstalten) in **Germany** gives the following: "Invalidity means those who are no longer able to earn one-third of the usual earnings of normal people in the locality". From the Insurance boards 16.2 per cent of in-

sured persons received invalidity benefits through pulmonary tuberculosis; 17.6 per cent through tuberculosis in all forms. In the German Empire in 1910 about 114,679 invalidity benefits were granted. It may be calculated that of these about 20,184 invalid benefits were paid for invalidity through tuberculosis. Judging by increases in previous years, the number of compulsory contributors in 1910 was 15,333,980 persons. Out of every 10,000 persons insured there were 13.18 cases of invalidity through tuberculosis in 1910. From official statistics compiled concerning Leipsic for one year we gain the following: —

"Out of 1,000 male insured persons there were 410.0 sick, of whom 8.7. were sick from tuberculosis in all forms. Out of 1,000 male insured persons the number of days sickness invalidity were 9392.4, of which 724.7 were owing to tuberculosis. Out of 1,000 days sickness of the male insured, 77.1 were due to tuberculosis. Each case of sickness (male) lasts 22.8 days; sickness from tuberculosis 83.0 days.

"Insured Females. Number of days sickness and invalidity 11,699.0; through tuberculosis 588.1. Out of 1,000 insured females the number sick was 442.9; through tuberculosis 7.0. Out of 1,000 days sickness 50.2 were due to tuberculosis. Each female case of sickness lasted on an average 26.4 days. Each female case of tuberculosis 81.3 days.

In **France** the number of patients incapable of work has been ascertained in certain administrative departments, For example, in the Postal and Telegraph Services among teachers and civil employés of the State, also in certain of the larger industries, the railways, and great ironworks. There are no general statistics. The assistance given by the municipalities in chronic cases has been established too recently to admit of the production of statistics by the municipal bureaux.

Mrs. Edwin Gray states that there are no statistics available for **Great Britain and Ireland,** but the Hearts of Oak Friendly Society calculates that each consumptive member takes on an average over 58 weeks of sick pay. The English National Association for the Prevention of Consumption found that one-eleventh of all the pauperism, costing in England and Wales £10,500,000 a year, arises from consumption, and that one-quarter of all deaths during the wage-earning age (15—55) are due to consumption, leaving many widows and children to receive aid from Friendly Societies, Poor Laws, and Charity Organisation. (See "Consumption and Civilisation," by John B. Huber, M.D.)

The average age at death of sixty-two consumptives dying at Kendal was 32, and of 574 dying in Edinburgh it was 33. This is a loss of ten years' labour at a wage-power of £35 per year, a loss of £350 per life. If consumption were abolished the average duration of life of persons who reach the wage-earning age of 15 would be increased by three and one quarter years.

To the above may be added the following information, supplied by Mrs. Ogilvie Gordon (Scotland). The duration of the illness is considerably influenced by the age of the patient, as a rule the younger the person the shorter the duration. Dr. Matthew A. Hay submits the following summarised table for 301 fatal cases of pulmonary phthisis carefully observed in Aberdeen.

Average Duration of Illness in relation to Age at Death

Age at Death	Number of Deaths	Duration of Illness
Under 15 years . .	28	0 years 9 months
15—25 years . . .	82	1 „ 11 „
25—40 „ . . .	100	2 „ 6 „
40—60 „ . . .	75	2 „ 4 „
60 „ . . .	16	3 „ 4 „
All ages	301	2 years 2 months

In another table, given by Dr. Matthew Hay, the actual duration of illness is stated from the time when it was recognised; 53 % of male sufferers and 55 % of female sufferers died within 18 months; 38 % of males and 34 % of females died during an illness lasting between 18 months and five years; 9 % males, 11 % females were ill for longer periods than five years. He adds that the period of work varied greatly in the different cases. In the majority of cases it extended from one to two months to a year, in a few cases work was carried on for years in an enfeebled state of health.

Within the last few years, Mrs. Gordon concludes, the reports of the Medical Officers of Health in the larger cities, as well as the reports issued in connection with sanatoria, are entering more fully into questions of the duration of illness, from the commencement of symptoms, from the time the invalidity sets in, and from the time when the patient is confined to bed. Another feature that is being carefully watched

is the after-history of patients who are bread-winners of families, and in whom the diesease may have been successfully arrested by sanatorium treatment, as to how far the return to work and wages is possible, or what amount of invalidity has to be reckoned with.

It may be interesting to add the following statement, taken from a Report of the Bellevue Hospital, **New York.** The impression that women when sick, kept at work more than men led us to investigate this point, and a study of 254 cases showed the following situation: —

	Men	Women
Working steadily . .	33 or 24 %	54 or 46 %
Working occasionally	31 „ 23 „	43 „ 36 „
Not working . . .	72 „ 53 „	21 „ 18 „

QUESTION V

Have you any special laws with regard to tuberculosis, and to persons suffering therefrom?

Dr. Agnes Bluhm sends many interesting details with regard to **Germany.** She states that in Prussia, Saxony, Baden, Oldenburg, Saxe-Altenburg, Alsace-Lorraine, and the free town of Luebeck, notification of deaths from pulmonary phthisis and tubercular laryngitis is compulsory. Saxony has compulsory notification of advanced cases of pulmonary phthisis and tubercular laryngitis, as well as notification of change of dwelling. Baden, also, with the addition of notification "of any case of tuberculosis in public schools, colleges, or rooms appertaining thereto". Oldenburg, notification of advanced cases of tuberculosis in case of change of dwelling, Saxe-Meiningen "for such cases of tuberculosis as are liable to communicate the disease to other persons by reason of infective discharge". Saxe-Altenburg, Alsace-Lorraine, the free towns of Hamburg and Luebeck have compulsory notification of change of dwelling of tuberculosis persons. Great stress is laid by the Prussian Medical Board on the latter point in all advanced cases, but it has not so far succeeded in its attempt to secure legislation on the subject. Indeed, all German specialists on tuberculosis agree that the spread of phthisis cannot effectually be prevented unless by special compulsory methods.

The National Insurance Act against sickness permits the Kranken-Kassen (Sickness-Insurance Societies) to give hospital treatment instead of sickness benefits, and that even without the consent of the patients, in any case "where the form of the disease demands treatment which it is not possible to give in the home of the patient, for instance, in the case of 'infectious diseases' ". But Dr. Bluhm does not know whether or how far the Krankenkassen apply this point to advanced cases of phthisis.

In **France** the laws relative to tuberculosis concern chiefly the houses of the poorer quarters, and apply to measures of sanitation and the compulsory destruction of unhealthy dwellings. Since the year 1900 certain of the great cities have had Sanitary Departments which cleanse the dwellings of tuberculous patients, and these owe their existence to a Decree. Laws relating to disinfection, to obligatory assistance to the sick, to the creation of a Bureau of Hygiene, and laws relating to Sanatoria, to educational hygiene, and to the hygiene of workshops, are beginning to be vigorously put into force.

In April 1905 **Denmark** passed two Acts, (Acts 69 and 70). Act 69 relates to the Prevention of Tuberculosis, and Act 70 to Subventions to Sanatoria. Notification is enforced.

In **Sweden** the only law is one with reference to Disinfection after death from tuberculosis. **Norway** passed a law concerning certain measures against tuberculous diseases in May 1900. This law includes notification. **Greece** has a law concerning the disinfection of the bedding and clothing of tuberculous patients, (1836).

In **England and Wales** there is compulsory notification to Medical Officers of Health by the following orders of the Local Government Board: —

Public Health, England:

No. 1234. December 18. 1908.

No. 261. (Tuberculosis in Hospitals) March 22. 1911. See information regarding provisions of national Insurance Act of 1911 pp. 49, 50, 60.

No. 1102 (Tuberculosis regulations) Nov. 15. 1911.

Scotland: The Public Health Act of 1875, Sections 112—116, was amended and applied to the Northern Kingdom by Public Health Acts 1890—7 (Scotland). Mrs. Ogilvie Gordon, D. Sc., Ph. D., F. L. S., forwards the following information: — "Pulmonary Phthisis is an infectious disease within the meaning of the Public Health (Scotland) Act of 1897, and the statutory powers and obligations devolving upon the local authorities, to deal with and control infectious diseases, extend to

Pulmonary Phthisis. These powers virtually cover the provision of every variety of house or hospital for the isolation and treatment of tuberculosis, e. g., sanatorium, dispensary, isolation hospital, tents, shelters, open-air schools, holiday homes, colonies, day camps, night camps, &c.

"The Local Government Board for Scotland is the national public Health Authority for Scotland, and it has powers, in terms of these Acts, to require local authorities to fulfil their statutory obligations in respect of tuberculosis, as of other infectious diseases. *The Infectious Diseases (Notification) Act, 1889,* was not made compulsory in Scotland in respect of any form of tuberculosis, but it was open to local authorities to extend the Act to Pulmonary Phthisis, or any tubercular disease, by special Order, and with the approval of the Local Government Board for Scotland. In 1911 it was calculated that local authorities representing over 60 per cent of the population of Scotland, had passed Orders enforcing the notification of Pulmonary Phthisis. Voluntary notification of other forms of tubercular ailments obtains in many other places in Scotland.

"On June 18, 1912, new Regulations were issued and were put into operation on August 1, 1912 *(the Public Health [Pulmonary Tuberculosis] Regulations, Scotland, 1912).* All medical practitioners and school medical officers have now to notify to the local authorities any case of pulmonary tuberculosis within 48 hours after first becoming aware that such person is suffering from pulmonary tuberculosis. The powers of the Public Health Acts are supported and extended by the provisions of the *National Health Insurance Act, 1911,* Sections 16, 17, and 64. The additional funds made available under the Finance Act, 1911, and the National Health Insurance Act, 1911, will greatly facilitate the extension of the activities of the public health authorities, both in town and country. The local county and burgh authorities will have the active cooperation of the National and Local Health Insurance authorities, and will only be expected to provide from the rates a portion of the sums required in respect of tuberculosis.

Ireland. — In 1908 an Act *(The Tuberculosis Prevention (Ireland) Act)* was passed dealing with Tuberculosis. This Act was divided into three parts.

Part I deals with Notification which was voluntary; i. e. Notification of Tuberculosis was compulsory in the original Bill as presented to Parliament. This was altered in its passage through the House of Commons, but any County Council or

Local Authority can, by resolution, make the Act compulsory in its area. This has been done by some Local Authorities, including Dublin and Belfast.

The Act limits Notification to cases of Tuberculosis which are a danger to others owing to the infectious nature of the discharge from the patient.

When Tuberculosis of the Lung has been notified as being present, it then becomes *the duty of the Sanitary Authority,* through their officers, *to aid the person suffering and those who live with him, by advice and instruction.*

When a case of Tuberculosis has been notified, the Sanitary Authority, upon the certificate of the Medical Officer of Health or other medical practitioner, will be in a position to require the cleansing and disinfection of any house or part of a house in which the patient is lodged, and of any article therein likely to retain infection.

The further power is conferred on the Sanitary Authority to require any bedding, clothing, or other articles which have been exposed to the infection of Tuberculosis, to be delivered to their officers for the purpose of disinfection. In such circumstances it devolves on the Sanitary Authority to disinfect the articles and return them to the owner free of charge, while in the event of unnecessary damage compensation is to be paid.

The power of disinfecting houses, bedding, &c., in cases of Tuberculosis during the progress of the disease, and also in cases where the patient dies or removes to Hospital or elsewhere, is a matter of considerable importance from the point of view of preventing its spread.

Part II of the Act deals with the establishment and management of special Hospitals and Dispensaries, irrespective of whether the notification clauses of the Act have been adopted by any District Council, the County Council may at once proceed to provide for the wants of their county by supplying hospital accommodation, dispensaries, &c.

Part III of the Act contains several useful provisions with which County Councils and Sanitary Authorities are armed with the object of preventing Tubercular disease. One section deals with the distribution of approved literature, and with lectures designed to educate the public as to the infectious character of Tuberculosis and the means of avoiding infection. Drugs or appliances which would tend to prevent or check the spread of this disease are also provided for.

Another section deals with Milk, the elimination from dairy herds of milch cows affected with Tuberculous disease of

the udder, and provides for payment of compensation in certain cases for the destruction of diseased animals.

A further section empowers Urban Authorities under certain conditions to send their Inspectors outside their own districts and into the District from whence they derive their milk supplies to investigate, and, if necessary, to enforce cleanliness and proper supervision in such dairies and cowsheds. The object of the sections dealing with milk is to secure a clean milk supply free from tubercular infective matter.

The passing of the National Health Insurance Act with its powers for the treatment of Tuberculosis and the accompanying grant of £1,500,000 under the Finance Act of 1911 to help in the provision of Tuberculosis Dispensaries in Great Britain and Ireland doubtless removes many of the objections which have been raised to compulsory notification on the ground that there were no suitable places for the treatment of tuberculosis patients when notified. Any difficulty that remained disappeared when further provision was made to enable Local Authorities to provide for uninsured persons as well as insured persons under the Insurance Act.

"On Thursday, August 1st., 1912, an announcement was made for the Government by the Chancellor of the Exchequer to the effect that an annual grant for the United Kingdom would be given by the Treasury to cover one half of the expenses incurred by local authorities, when approved by the Local Government Boards: —

> While the National Health Insurance Bill was passing through Parliament, provisions were inserted for extending sanatorium benefit to the dependents of insured persons, and in view of this the Government consented to bear one half of any deficit in regard to sanatorium benefit where local authorities undertook the other half. It is now urged that schemes for the treatment of tuberculosis should relate to the whole community, and generally that they should be organised and carried out by the Councils of Counties and County Boroughs. This extension involves additional outlay, and in view of this the Government have decided to place at the disposal of the Local Government Boards of the three Kingdoms annually a sum of money which will represent approximately half of the total estimated cost of treating the non-insured persons, as well as the dependents of insured persons.

In **Victoria** (Australia) there is notification to the Central Health Office, and the Local Municipal Council. In **New South Wales** there is compulsory notification in

the City of Sydney, but not in the country. In **Tasmania** phthisis is notifiable under the Public Health Act of 1903, and in **Queensland** an Act to amend the Health Act of 1900 was assented to December 31, 1911. The Public Health Act of 1908 for **New Zealand** makes notification compulsory. In **Cape Town** (South Africa) tuberculosis became a notifiable disease under the Public Health Act of 1904. **Canada** has no national system of vital statistics, but the Report of the Royal Commission on Tuberculosis in the Province of Quebec, 1909—10, contains statistics and full information. Notification of Tuberculosis became law in Ontario and in Nova Scotia in 1910. In the Province of Nova Scotia there is a law prohibiting expectoration on sidewalks and in public buildings. The **New York** law of notification and registration is most comprehensive and cases which are a source of danger are forcibly removed. The State of **New Jersey** passed a law in 1912 giving definite powers for compulsorily isolating dangerous cases. (see p. 66.)

Argentina has municipal regulations to the effect that all cases of Tuberculosis should be notified, also deaths, and also the change of residence of tuberculous persons. These regulations date from 1912.

QUESTION VI

Is there any distinction made between early cases and advanced cases in regard to the institutions provided, and if so, is there any recognised description of what is considered an advanced case?

The 99 free Sanatoria in **Germany** in general only accept early cases of Tuberculosis who are likely to recover their earning capacity. Patients with fever and advanced forms of pulmonary tuberculosis are not received in the Sanatoria. There are three hospitals for adults, and 144 homes or special wards in hospitals for patients suffering from pulmonary tuberculosis in all stages. There are also observation wards for the purpose of diagnosis and the locating of patients in the Sanatoria. The Turban-Gerhardtsche Classification, which is used in Germany, is an International Stage Classification,

adopted at Vienna by the International Conference on Tuberculosis, 1907. It will be used next year in **Norway** at the Lyster Sanatorium, and has been in use at the Norwegian Sanatorium at Reknoes since 1908. **New South Wales** uses Turban's Classification in the Queen Victoria Homes. It is also employed at the Bellerfield Sanatorium in Scotland.

Mrs. Edwin Gray states that in **England and Wales** there is no officially recognised description of an "advanced" case. "Speaking broadly, however," she says, "an advanced case is one which with present-day treatment offers no reasonable prospect of recovery." Dr. Hope, Medical Officer of Health for Liverpool, says "a patient suffering from active pulmonary tuberculosis, with cavity formation, rapid lung destruction, and whose sputum contains large numbers of tubercle bacilli, is regarded as an advanced case. Although Turban's Classification is also used in England, experts are not agreed as to its being the best method. This classification recognises three stages of pulmonary tuberculosis.

Stage 1. Disease of slight severity limited to small areas of one lobe, which, for example, when affecting the apices bilaterally, does not extend beyond the scapula and the clavicle, or unilaterally, does not extend beyond the second rib anteriorly.

Stage 2. Disease of slight severity, more extensive than Stage 1., affecting at most an entire lobe, or of greater severity, extending at most over half a lobe.

Stage 3. Disease of greater extent than just defined, and all cases with considerable cavities.

Medical practitioners in **Scotland** would class as an "advanced" case one with extreme active disease in one lung, or where both lungs are considerably involved in active process.

The classification used in the **United States of America**, and in **Canada**, and given in the Annual Report for 1911 of the Canadian Association for the Prevention of Tuberculosis, gives a basis of comparison of results of institutions engaged in this work.

At a Conference held in 1911 by the principal Medical Officers of Health, on uniform measures for the control of cases in the states of **Australia** an almost identical classification of cases was adopted to that in use in the United States and in Canada (No. 4. 16162. Government Printer. Melbourne). The text of the classification of cases agreed upon in Australia is as follows:

1. **Incipient** (favourable). — Slight initial lesion in the form of infiltration limited to the apex of a small part of one lobe. No tuberculosis complications. Slight or no constitutional symptoms (particularly gastric

or intestinal disturbances or rapid loss of weight). Slight or no elevation of temperature or acceleration of pulse at any time during the twenty-four hours, especially after rest. Expectoration usually small in amount, or absent. Tubercle bacilli may be present or absent.

2. **Moderately advanced.** — No marked impairment of function either local or constitutional. Localised consolidation moderate in extent, with little or no evidence of destruction of tissue, or disseminated fibroid deposits. No serious complications.
3. **Far advanced.** — Marked impairment of function, local and constitutional. Localised consolidation intense; or disseminated areas of softening; or serious complications.

In **England, Wales and Scotland** Sanatoria have been provided, with few exceptions, by voluntary effort, and seek to restrict their admissions to early and curable cases of phthisis, and if, as often happens, advanced cases are sent, the Managing Committee dismiss these as soon as possible. Advanced cases are treated by some Municipalities (see Answer 7), at the Infirmaries of the Poor Law Unions, and at some few voluntary institutions. The public hospitals in Scotland not infrequently provide for advanced cases.

The following is the description given of the admissions to Bellerfield during one complete year: —

> "About 20 per cent were early cases, well fitted for curative treatment; another 5 per cent were early cases complicated, for example, by heart disease or the like on the one hand, or by domestic poverty on the other. The remaining 75 per cent included about 30 in the second or moderate stage, and 45 per cent in the third or advanced stage of the disease. When beds are available, these more advanced cases are sent to Bellerfield for educative treatment for three or four months. The majority of these do well, improving both in general and local condition. If their circumstances are such that they are able to continue to live according to sanatorium rules at home, they may do well and recover health."

Ireland. The Irish Sanatoria do their utmost to admit only cases in the earlier or incipient stage. It is found difficult to always keep to this hard and fast rule: but although of necessity cases in the early second stage of the disease are admitted, advanced or hopeless cases are excluded.

Two years ago the President of the Women's National Health Association established the Allan A. Ryan Home Hospital for Consumption in Dublin, for the treatment of cases in the second stage of the disease. Cases were admitted in

which there was any chance of improvement, and only cases in which there was no likelihood of improvement, excluded. The results so far have been most encouraging, and the Committee have no doubt but that the need for Homes for such cases is a pressing problem. As is to be expected the stay in the Home for those patients far exceeds that of those in the early stage. Tuberculin used in selected cases has been very successful.

There are in Dublin, Belfast and Cork, Hospices or Homes for advanced and hopeless cases. The number of beds is limited, and cannot accommodate all cases. The Sanatoria decline to take such cases in and if admitted to a General Hospital they are discharged as quickly as possible. Of late years many Branches of the Women's National Health Association throughout the country have nurses employed solely for looking after Tuberculosis patients. These nurses do a great deal, to prevent the spread of infection by advanced cases whose families live in small houses and tenement rooms. In Dublin there is a special staff of nurses attached to the P. F. Collier Memorial Dispensary for the prevention of Tuberculosis, who, amongst other duties, devote special attention to advanced cases. Extra rooms are rented when necessary. There are special nurses both at Belfast and Cork.

In **France** cases of tuberculosis in the earlier stages are treated in the very numerous dispensaries, some of which are under the "Assistance Municipale" or the "Assistance publique", others are privately supported. Confirmed but curable cases of tuberculosis are treated in sanatoria, or in tuberculosis dispensaries. More acute cases are received in general hospitals or helped through special societies the number of which grows daily. Incurable sufferers are taken in Hospitals for Chronic Cases or in the hospices (for example at Brévannes).

No institutions exist in **Finland,** with the exception of the hospital, where cases can be isolated.

In **Russia** it is understood that the name of "advanced case" is given to those which are accompanied by prominent destruction of the pulmonary tissue.

In **Denmark** Sanatoria are used for Stage 1., Tuberculosis Hospitals for Stage 2, and Tuberculosis Asylums for Stage 3. There is no recognised description of what is considered an advanced case either in Denmark or in Norway. In the latter country the more advanced cases go to special Homes, of which there are between 50 and 60 (about 1,000 beds). In some cities the Fürsorgestellen (Dispensaries) examine patients and send them to Hospitals, Sanatoria or Homes according to the state of health of the patient.

In **Canada** advanced cases are taken in three Sanatoria or hospitals, and five others receive "moderately advanced" cases.

In **Argentina** both advanced cases and hopeful cases are treated in hospitals.

In **South Africa** (Cape Town) there is some provision made for advanced cases. In **Australia** (Victoria) hospitals for incurables and ordinary general hospitals take acute and advanced cases, but do not isolate. Certain medical practitioners are appointed to examine each case applying for admission, whether examined by other doctors or not. **New Zealand** and **Tasmania** employ Sanatoria for early cases, and **New South Wales** and Tasmania have invalid homes for advanced cases, provided by charitable institutions. Those in Tasmania are under the State. In New Zealand advanced cases are mostly admitted to general hospitals (in special wards) and chronic cases are provided for in secondary hospitals. Advanced cases are not generally taken in **Holland** either at Dispensaries Day Sanatoria, or other Sanatoria.

The Preventoriums, which are so numerous in **Germany** are found to be both prophylactic and educative. Farningdale, New Jersey, in the **United States** and Ste. Agathe des Montes **(Canada)** are excellent types of such preventive institutions, in which persons predisposed to tuberculosis find adequate treatment for the restoration of their health, and through which they and their families learn preventive methods.

The Preventorium at Sutton near Dublin **(Ireland)** which takes in cases who have been exposed to the infection of tuberculosis has made an excellent record in restoring useful lives threatened with disease to full working capacity.

QUESTION VII

What means are taken to isolate advanced cases in your country by

(a) National Legislation

(b) Municipal Legislation

(c) Voluntary Associations or Institutions?

(a) National Legislation

There is no National Legislation in Germany, France, Great Britain, Russia, Finland, Argentina, Holland, Greece, or Victoria (Australia).

Denmark, passed two Acts for the Prevention of Tuberculosis in 1905, which provide for a very large amount of control of tuberculosis patients by the Sanitary and Epidemic Boards under the superintendence of the Chief Sanitary Board. Under the Act which prescribes compulsory notification, houses and clothing may be disinfected by order, and although no person can be compulsorily taken to hospital, a great deal of authoritative persuasion can be exercised by the Board when a person suffering from phthisis is found to be living under conditions which are peculiarly favourable to the spread of the disease. No children can be boarded out unless a certificate is produced from a medical practitioner stating that no inmate of the house is suffering from phthisis, and the boarded-out child must also be free from the disease. Teachers must be free from the disease. Factories and workshops must be open to public inspection. State Subventions may be granted to such hospitals for tuberculosis, and homes for nursing patients as have received authorisation from the Government. No State Subvention granted to a poor patient shall be considered as relief. Expectoration in public rooms and railway carriages is prohibited, and every medical practitioner can have samples of sputum examined at the expense of the State. (For all details the Danish Act 69 and 70 should be studied.)

In her report for **England and Wales,** Mrs. Edwin Gray states that there is no compulsory power to isolate advanced cases of tuberculosis, except in the County Borough of St. Helen's, where, under a local Act of Parliament, the isolation of advanced cases can be enforced (See Question 6). Up to this year (1912) no means have been taken by the Government to isolate or treat such cases, but by the National Insurance Act which came into force on July 1st., 1912, these cases will be treated in Sanatoria, or in other institutions, or at home. A capital sum of £1,500,000 will be provided by Parliament, to be used for grants in aid of building Sanatoria and other institutions provided by Local Authorities, other than Poor Law Authorities, and in any other suitable ways. These monies are to be taken from the General Insurance Fund as follows: —

1s. 3d. for every insured person, and 1d. from each such person, payable out of monies provided by Parliament, provided that the Insurance Commissioners may retain the whole or any part of the sum provided by this penny for the purposes of research (Section 16, sub-sections 1 and 2).

In **New Jersey** an Act has been adopted giving powers of compulsory removal of patients who are a danger to the public, and in **New York** City such patients are also isolated when necessary by the Board of Health.

In **Norway** the Board of Health can order a tuberculous patient to a hospital, if either he or his fellow lodgers neglect to follow out the prescribed measures. The State provides two Sanatoria — at Reknoes and at Lyster. The Health Acts at Cape Town **(South Africa)** give extensive powers to local authorities, but, except in a few places, little is actually done. **New South Wales** has a special hospital for hopeless cases, provided by the State. In **Tasmania** destitute persons suffering from phthisis can be isolated. **New Zealand** passed a Public Health Act in 1908, and an Amending Act in 1910. In **Greece** the State is contemplating the building of a great Sanatorium. In **Canada** the Ontario Government allocates three dollars a week for patients not paying above $ 4.90, and thus encourages the erection and maintenance of County and Municipal Sanatoria.

The laws in **the United States of America** vary in the different States (see Appendix p. 62).

(b) Municipal Legislation

Although without power to legislate, the Municipalities are doing much in **England and Wales** to prevent and cure this disease. The means adopted vary. Eight Municipalities have provided Dispensaries, one of which (Portsmouth) is for Tuberculin treatment, as well as for General diagnosis and treatment. Several subsidise Sanatoria, securing thereby a fixed number of beds, and an increasing number are using the wards of fever and smallpox hospitals rendered vacant by the large decrease of zymotic diseases and the practical elimination of smallpox. Others have erected open-air shelters. These Municipal Wards and Shelters appear to be used for advanced cases, for a limited time in each case, the main object being to teach them to render themselves non-infectious on their return home. The opinion is growing that this will be one of the many benefits of Sanatoria, and that advanced cases may well be taken in such Sanatoria with that end in view. A large number of cases of advanced tuberculosis are taken into the Poor Law Infirmaries in England and Wales, Scotland and Ireland, administered by special separately elected Boards of Guardians or Parish Councillors, which administer relief to the destitute poor. Many of these Workhouse Infirmaries have open-air wards and shelters, and in England

three Boards of Guardians have erected Sanatoria (113 beds) and three Boards of Guardians have conjointly erected a Sanatorium.

There is no Municipal Legislation in Germany, except in the free town of Bremen. The Orders of the Board of Health apply in Russia, and the Danish Act (see (a)) are administered by local boards, as are the Public Health Acts of Great Britian and Ireland. Where the County and County Borough authorities have not made the notification of cases of tuberculosis compulsory (See Answer 5) it is impossible for them to overtake the problem of isolation of advanced cases with any completeness.

In **Scotland** all the local authorities have powers to make arrangements for the removal of advanced cases to hospital or some suitable home, or patients may be isolated as far as practicable in their own houses and supervised by the local sanitary authorities. The local authority is entitled and obliged to apply the Public Health Acts to pulmonary tuberculosis, but it ought to be added that within the institutions, as hitherto provided, space may be limited and isolation in the strict sense is scarcely attempted. The Poor Law authorities are charged not with the care of Public Health, but only with the relief of the poor, and "they are under no obligation to isolate cases of infectious disease in the interest of the public health, and it would possibly be illegal to spend the poor rate on isolation, other than such isolation as may be necessary to protect other paupers from infection". (See Local Government Board Report for 1908.) Mrs. Ogilvie Gordon adds: "One very serious result of the somewhat anomalous position of the Poor Law authorities is that tuberculous cases of the indigent class may be taken to the Poorhouse for medical treatment and nursing attendance, and when they feel a little better, or are inclined, they are free to go out and live with friends in squalid houses or lodgings. Until the local authorities stringently exercise their powers and are prepared to provide for isolation, such "in-and-out" poor cases must continue to be a menace to whole communities."

In **France** early cases are treated in the very numerous Dispensaries, some under "l'Assistance Municipal, or l'Assistance Publique". The Municipality of Athens **(Greece)** has a small Pavilion in connection with its Hospital, in that city. In **New Zealand** cases are dealt with by the Inspectors of the Public Health Department under the Act of 1908, and by the Inspectors of the Hospital Boards (Municipal) under the Amending Act of 1910.

It is stated that the Municipalities have extensive powers under the Health Act in Cape Town **(South Africa)** but that except in a few cases little is done. Some accommodation for advanced cases likely to spread infection is provided at the old Somerset Hospital in Cape Town.

The State Legislatures and County and Municipal bodies in the **United States** recognised the importance of Tuberculosis work by making appropriations of over 9,600,000 dollars for the maintenance of their special tuberculosis sanatoria for 1912. The States of Alaska, Georgia, and Tennessee care for advanced cases only in their Hospitals. In 1911 over $ 11,800,000 was spent for the erection of Sanatoria and hospitals. Dispensaries for the examination and treatment of tuberculosis spent $ 850,000, and associations and committees in their educational campaign against tuberculosis spent $ 500,000. The remaining $ 1,300,000 was spent for treatment in open air schools, prisons, and hospitals for the insane, and also for the work of state and local boards of health against tuberculosis.

Compared with the expenditures in 1910, those of the past year are practically the same in the aggregate, but they are almost double those of 1909. The National Association points out, however, what it considers more significant than the aggregate expenditures, namely, that the percentage of money spent from public funds is greater in 1911 than ever before, being 66.2 per cent of the total. In 1909 only 53.5 per cent of the total expenditures was from public funds, and in 1910 it had increased to 62.6 per cent. In 1911, over $ 9,600,000 of the $ 14,500,000 spent was from federal, state, municipal, or county funds. Since the chief work of the anti-tuberculosis associations is to urge the public authorities to provide for tuberculosis patients, and thus to assume the responsibility for stamping out this disease, the increased percentage of public money is regarded as a very favourable sign of progress.

Appropriations of over $ 10,000,000 for tuberculosis work in 1912 have already been made by state legislatures and municipal and county bodies.

(c) By Voluntary Associations

In this, as in every other progressive movement, private initiative and voluntary organisations, often most carefully planned and assiduously worked, have led the way. The Anti-Tuberculosis Associations of the **United States, Canada,***

* The Canadian Association is supported by a grant from the Federal Government.

Denmark, Sweden, Holland, England, etc., are among those which have arranged Conferences and public meetings, compiled statistics, published reports, made known experiments, disseminated leaflets, and in other ways facilitated a knowledge of the ravages of the disease, and of the best measures to take for its prevention and cure. Of Societies of Women for this purpose, a prominent place must be assigned to the Women's National Health Association of Ireland, initiated by the Countess of Aberdeen, the President of the International Council of Women. In **Great Britain** much of this work is organised by local committees and not by centralised Societies.

Mrs. Edwin Gray considers that there is very little accommodation under this head in England and Wales. There are a few Homes for advanced cases of consumption provided by voluntary effort, and a few Homes for the Dying, also provided by private initiative, which receive advanced cases of consumption in addition to the Poor Law Institutions referred to.

In **Scotland** voluntary effort, both in town and country, has done much for the sanatorium treatment of consumption and in providing dispensaries in the thickly populated cities. In the immediate neighbourhood of all the chief towns in Scotland there exist voluntary institutions where at least a certain number of advanced cases of tuberculosis can be received. In most of these, part payment may be made by the patients or their friends. In **Germany** the Auskunfts — or Fürsorgestellen für Lungenkranke (Dispensaries for consumptives), which are worked in close connection with the Sickness Insurance and Poor Law Guardians, supply a "Fürsorgeschwester" (nurse) who advises the patient as to isolation, and if he is willing sees to his removal to hospital. If the patient is not of the compulsorily insured class he may be given pecuniary help to go to hospital, which he could not otherwise do for want of means. In other cases the family are advised to seek larger rooms, and in cases of extreme poverty the difference in the rent is paid by the Fürsorgestelle or a room is rented for the isolation of the patient. There are in Germany 525 of these Fürsorgestellen for the benefit of persons suffering from phthisis, and in the Grand Duchy of Baden, 537 of the so-called Tuberculosis Committees; — the number of the former is rapidly on the increase.

The enormous amount of work done for Tuberculosis patients in the **United States** is indicated in the volumes issued by the Russell Sage Foundation, "The Campaign against Tuberculosis". The Reports of the National and the State Associations for the Study and Prevention of Tuberculosis,

the Charity Organisation Societies, the Henry Phipps Institute to which there is a Hospital for advanced cases attached and other societies.

Nearly 2,000 organisations of various kinds were engaged in the fight against tuberculosis on January 1, 1912, and new agencies have been formed during the past year at the rate of about one a day, according to a statement issued by The National Association for the Study and Prevention of Tuberculosis.

These anti-tuberculosis agencies include 618 associations and committees; 451 sanatoria, hospitals and camps; 365 dispensaries and clinics; and 91 open air schools. If to these were added 200 state and local boards of health and a number of other institutions, such as hospitals for the insane and penal institutions making special provision for tuberculosis cases, the total number of agencies engaged in tuberculosis work would be swelled to nearly 2,000.

During the year 1911 the greatest percentage of increase among the different forms of tuberculosis work was among the open air schools for anaemic and tuberculous children. On January 1, 1911, there were only 29 open air schools in operation or provided for in the entire country. On January 1, 1912, there were 91, an increase of 214 per cent. Sixty-two new schools have been established or provided for this past year. This entire number of open air schools have been established since January 1, 1907.

On January 1, 1905, there were about 150 different agencies engaged in anti-tuberculosis work, of which number 111 were sanatoria. The increase to over 2,000 agencies has emphasized, the National Association points out, the importance of the campaign for the prevention of consumption being carried on in all parts of the country. The following table summarizes the growth of the anti-tuberculosis movement in each line of activity for each year since 1905:

	Year	Associations	Sanatoria and Hospitals	Dispensaries	Open Air Schools
Established before	1905	18	111	18	
„ during	1905	15	18	6	
„ „	1906	18	16	14	
„ „	1907	46	30	45	1
„ „	1908	109	45	118	2
„ „	1909	167	67	59	10
„ „	1910	117	68	62	16
„ „	1911	128	96	43	62
Total (January 1,	1912)	618	451	365	91

According to the most recent information (July 1912) nearly 4,000 additional hospital beds for consumptives in 29 states were provided during the year ending June 1st according to a statement issued 1911 from the records of the National Association for the Study and Prevention of Tuberculosis. This makes a total of over 30,000 beds, but only about one for every ten indigent tuberculosis patients in this country.

In the last five years, the hospital provision for consumptives has increased from 14,428 in 1907 to over 30,000 in 1912, or over 100 per cent. New York state leads in the number of beds, having 8,350 on June 1st; Massachusetts comes next with 2,800; and Pennsylvania, a close third with 2,700. Alabama showed the greatest percentage of increase in the last year by adding 57 new beds to its 42 a year ago. Georgia comes next with 109 beds added to 240 a year ago. New York has the greatest numerical increase, having provided over 1,800 additional beds in the year.

Only four states, Mississippi, Nevada, Utah and Wyoming have no beds whatever in special hospitals or wards for consumptives. Eight years ago, when the National Association was organized, there were 26 states in which no hospital or sanatorium provision for consumptives existed, and the entire number of beds in the United States was only 10,000.

"While these figures would indicate a remarkable growth in anti-tuberculosis activity," says Dr. Livingston Farrand, executive secretary of the National Association, in commenting on this subject, "there are still practically ten indigent consumptives for every one of the 30,000 beds, including those for pay patients. In other words, we have from 250,000 to 300,000 consumptives in this country too poor to provide hospital care for themselves. If tuberculosis is ever going to be stamped out in the United States, more hospital provision for these foci of infection must be provided."

A large number of voluntary Societies and Institutions for the purpose of combating Tuberculosis exist in **Denmark**, many of which are subsidised by the State, as well as by the Danish National Association for the Combating of Tuberculosis.

The accommodation in **Sweden** is very limited. Incurables are looked after by the Dispensaries. In **France** private initiative has already provided many institutions, and is constantly increasing. In **Greece** Madame Schliemann has started a small hospital in a Suburb of Athens, which has done excellent work. Private benevolence is active in **Russia**,

and in **Victoria** (Australia) the ordinary general hospitals receive advanced cases, but do not isolate. Very advanced cases go to the Austin Hospital for Incurables.

In **Canada** advanced cases are taken gratis at the Lady Grey Hospital at Ottawa, and in the Grace Dart Home for Women in Montreal. The Jewish Consumptive Hospital and six other Sanatoria take moderately advanced cases, and six take advanced cases. The Canadian movement known as "The Hygienic Nine" and affiliated to the National Association associates women for practical help to Tuberculosis patients. Groups of nine are brought together in the cottages for instruction in tuberculosis methods. No membership fees are charged. The President is Mrs. Duncan of London, Ontario. St. Elisabeth's Chapter of the Daughters of the Empire, a widely spread Canadian movement, sews garments for the sick; St. Cecilia's Chapter raises money by giving concerts; and St. Hilda's Chapter keeps hens so that consumptive patients in the locality may have fresh eggs. See report to the Canadian Society for the Study of Tuberculosis at its Meeting at London, Ont., in 1911, by Mrs. P. C. Crerar of Hamilton. There are Hospitals and Sanatoria in British Columbia (2), Manitoba (2), Nova Scotia (1), Ontario (11), Quebec (4). Moderately advanced cases are taken in seven establishments and advanced cases in six of these establishments. There are clinics and dispensaries in New Brunswick, Ontario (3), Prince Edward Island (1) and in Quebec (2) and Anti-Tuberculosis Associations and Committees in 70 centres in Alberta, British Columbia, New Brunswick, Nova Scotia, Ontario, Prince Edward Island, Quebec and Saskatchewan.

The following table shows the number of tuberculous patients yearly cared for at the charitable institutions of the principal cities of **Greece**: —

Hospitals of	Athens	700	on an average yearly
„	Piraeus	54	yearly
„	Corfu	53	„
„	Syra	40	„
„	Argostoli	23	„
„	Larina	79	„
„	Calamus	16	„
„	Chalcis	5	„
„	Nauplia	3	„
„	Lancas	2	„

QUESTION VIII

Is there any difficulty in persuading advanced cases to go to such institutions as may be provided for them, and if there is how do you endeavour to overcome it?

Great difficulty is found in **Germany**. The Invalids' Homes, founded by the National Insurance Societies, in spite of all the comforts they contain, and the expense with which they were erected, are very little used. Dr. Bluhm says that she thinks they have ceased to exist. The present tendency is towards the establishment of special Hospital Sanatoria, in which patients in all stages of the disease will be received. It is thought that if curable cases are treated with others that the hope of recovery may encourage a more frequent use of institutional help. **Norway** takes the same view.

In **France** there is difficulty, especially with men, who, if at the beginning of their illness are not feeling constantly ill, are reluctant to leave their work, more particularly if they have families. But the Dispensaries, with their visitors who reason with the sick and endeavour to persuade them to go, are beginning to make progress as education spreads little by little in towns. It is found necessary to establish an understanding among charitable societies, so as to ensure that the families of the sick shall receive regular assistance. Argentina also places much reliance upon the persuasion of relatives, as there is no law to compel a tubercular person to enter a hospital.

Difficulty is reported from **South Africa** (Cape Town) and Tasmania. It is not usually met with in Norway. In **England and Wales** patients are quite ready to go to Sanatoria, and to special institutions, with the exception of the Poor Law Infirmaries attached to workhouses. Moral suasion is the only means available.

It is proposed to found a number of small hospitals in Wales where all classes of cases will be received in order to induce advanced cases to go more readily to institutions and thus diminish the danger to others.

In **Ireland** since the initiation of the national campaign against Tuberculosis, which has widely educated the public as regards the danger and infectivity of this disease, there is comparatively little difficulty now in getting patients in the advanced stage of the disease to leave their homes. The diffi-

culty is in providing sufficient accommodation for such cases. Later on when "Homes" for advanced and hopeless cases are started in each county under the provisions of the Insurance Act, it is felt that patients in this condition will readily avail themselves of these institutions.

Finland, Russia, Denmark, Greece, Victoria and New South Wales have no difficulty. **Cape Town** has such limited accommodation that there are always enough willing patients to fill it. **Holland** has no special institutions for advanced cases, and complains of the lack of beds for patients needing care. In **Norway,** according to the Law on Invalid Insurance (1909), a sick person cannot get pecuniary assistance from the Invalid Fund if he refuses to go to the Infirmary when the physician thinks it necessary that he should do so. In **New Zealand** legislation permits compulsory removal, while **Tasmania** can only urge the benefit of removal to the patient and family by way of overcoming the difficulty of persuading advanced patients to go to such institutions as may be provided for them. In **Scotland** the chief difficulty is to provide accommodation in the institutions for advanced cases that are willing to go.

QUESTION IX

Are there any special methods employed to educate advanced cases living at home regarding the means they should use to protect the other members of their families against infection, such as

1. **Visiting Nurses**
2. **Health Visitors**
3. **Tuberculosis Classes**
4. **Instruction at Dispensaries or other Institutions?**

In **Germany** the Sisters (nurses) of the Fürsorgestellen (dispensaries) visit the patients and advise them and their families how to prevent the spread of infection. There are no Health Visitors, but insured persons unable to work are visited by Inspectors from the Krankenkasse. These Inspectors are instructed by special doctors about the dangers of infection and methods of prevention. No Tuberculosis classes are organised;

but the danger of Tuberculosis and the means of prevention are included in lessons on Hygiene given in the schools, and in some districts two lectures on the subject are given yearly in the National Schools. Instruction is also given to the patients in Sanatoria and Hospitals. Berlin has a permanent Tuberculosis Exhibition, and there are five itinerant Tuberculosis Exhibitions in Germany, Leaflets published by the Imperial Board of Health are also distributed, and many lectures given to adults.

In **France** there are Visiting Nurses to Schools and Infirmaries, Benevolent Visitors to the Dispensaries, and Enquiry Officers attached to the dispensaries, public and private, and to charitable institutions. Instruction is given to children in schools, to soldiers, and to the sick in hospitals. Conferences are held in the municipal buildings and in private institutions, and notices, pictures and pamphlets are distributed and published, notably by the Society for the Prevention of Tuberculosis.

In **Holland** the Central Association to Fight Against Tuberculosis (subsidised by the State) employs visiting nurses and health visitors, also gives instruction. Lectures have been given in different towns and villages. A transportable Museum of Tuberculosis is also employed.

In the large towns of **Russia** there are Dispensaries and Charities, the managers of which give instruction to patients, and a League to fight Tuberculosis has lately been founded. In Copenhagen **(Denmark)** patients are visited from the Dispensary. In **Greece** Health Visitors in connection with philanthropic societies, such as the Union of Greek Women, and the Friends of the Poor, work in a restricted circle. The printed matter distributed by visitors of the hygiene section of the Union of Greek Women was the first literature which brought home to the popular mind the elementary notion of prophylactic hygiene in connection with Tuberculosis. A well-organised and equipped Anti-Tuberculosis Dispensary on the "Calmette" lines has lately been opened, and is doing good work under the auspices of the Pan-Hellenic Anti-Tuberculosis League.

The Law of 1900 for **Norway** provides that physicians shall give directions as to the measures that are to be taken, and visiting nurses are provided, for the purpose of seeing that these instructions are carried out, by the National Association against Tuberculosis. The same Law provides that the head of the local Board of Health shall supervise the patient if he has no private doctor. Instruction is given by the National Anti-Tuberculosis Association, and in connection with

their Dispensaries which are to be found in most cities and districts. The Association has also opened a travelling Tuberculosis Museum.

In **Sweden** the dwelling-house for consumptive workmen with healthy children, at Stockholm, endeavours to teach working people to live their ordinary life in a hygienic way, which shall bring no danger to their children. A similar experiment is also carried out in a country place in which consumption is very common. The Swedish Anti-Tuberculosis Association (S. T. A.) has started a great many Dispensaries in different parts of the country, and distributes very telling leaflets. It is of interest to note that all the young men of the country, when presenting themselves for military service, receive at the preliminary mustering a pamphlet published by this Association, which contains a short account of the most important points of the Tuberculosis question. For the higher classes in the primary schools a book has been prepared by Dr. Israel Holingren, which has been sent free of cost to all primary schoolmasters in the country.

There are Visiting Nurses, known as District Nurses, provided by voluntary effort in all large towns, and in many rural districts of **England and Wales and Scotland and Ireland.** In **Ireland** many of these nurses are supported by the Women's National Health Association. Some of these have undertaken the education of advanced cases living at home. Dispensary Nurses do so likewise. In England and Wales large numbers of Health Visitors are employed by Municipal Authorities, and also by Voluntary Health Associations having for their object the improvement of the public health and the cure and prevention of consumption. These Health Visitors are generally trained nurses, and have usually passed the Health Visitors' Examination of the Royal Sanitary Institute of Great Britain and Ireland. A beginning has been made under local Sanitary Authorities in Scotland to employ certain of the Health Visitors solely for tuberculosis cases. Usually, however, Health Visitors in Scotland have to undertake general work, including tuberculosis work*. Tuberculosis Classes were originated at Boston (U. S. A.) in 1905, by Dr. Josiah H. Pratt and have been most successfully carried on in many places in America. Much depends on the personality of the doctor who acts as the teacher and who inspires emulation amongst the members of the class to obtain high marks. With

* The term "Local Sanitary Authority" signifies the Health Department of the work of a local authority (County Council or Borough Council).

the exception of Belfast, where Dr. Marion Andrews has done excellent work, and in Dublin under Dr. Daniel there appear to be no Tuberculosis Classes in the countries contributing to this Report. This method offers a means of obtaining control over patients being treated at home both for early and advanced cases with the co-operation of the members of the class and should receive more attention.

The Dispensary system, when in full working order, provides the means for classifying the cases, and for securing for each the most appropriate treatment whether it be open-air school, sanatorium, hospital, home for advanced cases, or the patients' own home. The co-operation of all charitable agencies is sought. The aim of the Dispensary is that there shall not be one uncared-for case of tuberculosis within the dispensary district.

There are eight Dispensaries upon the Edinburgh model in London, promoted and supported by voluntary efforts, and four in the Provinces — at Portsmouth, Oxford, Bristol, and Plymouth. Glasgow has five Tuberculosis Dispensaries, also on the Edinburgh lines. Each Dispensary has a visiting nurse attached, whose outdoor work concerns the ward or district of the city which that dispensary serves. Practical instruction is given as to diet, cleanliness, and effective treatment within the home. Short demonstrations are held, and occasional lectures given. The Dispensary at Oxford is subsidised by the Local Authority, the provision of others is now being considered by several Local Authorities. The patients attending the Dispensaries are visited in their homes by a doctor, who advises as to hygienic conditions, and examines other members of the household. Contact cases are thus early ascertained. The doctor is assisted in this home visitation by a trained nurse, who makes periodical visits and ensures that the patients under treatment at home are following the instructions they have received.

A Departmental Committee on Tuberculosis was appointed in 1912 to advise the Government and local authorities in the conduct of the National Campaign against Tuberculosis. Its Report (C. D. 6164) is a practical adoption of the Edinburgh co-ordinated scheme, with the Dispensary as the first, and perhaps the most important unit.

The National Association for the Prevention of Consumption followed the example of Ireland in 1910 and organised a Tuberculosis Exhibition, and it is open to local authorities to make arrangements for the display of exhibits in some public hall, and to provide for a series of lectures in

connection with the Exhibition, to be given by experts on different aspects of Tuberculosis and its treatment and prevention. During 1910 and 1911, the most remarkable success attended the display of this Exhibition in the chief towns of England and Scotland. No exhibit of recent times has so called forth the crowds of working-class people, and the probability is that definite courses of instruction will be the next step in advance. Tuberculosis caravans are also provided, for the purpose of spreading information and of arousing interest in the smaller towns and country districts.

In **Cape Town,** and in some of the larger principalities of South Africa, something is done in the direction of education by the Sanitary Staff and by Lady Visitors. Some localities provide special rooms in the native location for phthisical natives.

In **Victoria** (Australia) the Melbourne District Nursing Society visits, and the Hobart City Council **(Tasmania)** employs a visiting nurse who also acts as sanitary inspector. In Victoria the Medical Officer of Health gives certain instructions when visiting after receiving notification. Lectures are given by the Australian Health Society, and leaflets are distributed. In Tasmania literature is supplied to each household from which a case is notified. The Health Visitors in Sydney **(New South Wales)** give instruction. The Department of Public Health for **Queensland** has issued a leaflet for general use giving rules for consumptive patients, and for those persons looking after them, which points out that consumption is *communicable, curable and preventable,* and gives a list of precautions to be taken by the patient. **New Zealand** has Visiting Nurses and gives instruction at its institutions.

QUESTION X

Are any measures taken to protect the children or other dependents of patients against infection?

In **Germany** several methods are taken. If a tubercular patient goes to the Fürsorgestelle (dispensary) the nurse on her visit to the family of the patient advises them to have themselves examined at the Dispensary also. If anyone is found ill he is persuaded to go to a Sanatorium, and the necessary funds are provided to enable him to do so. If anyone is

found only threatened with tuberculosis and otherwise healthy, he is sent to a forest Preventorium, or to Salt Water Baths. Of the school children selected to be sent to the holiday Colonies, those of tubercular parents get the preference. In Halle, the National Frauenverein (Women's Association) have erected sleeping shelters in the park of the Children's Sanatorium for the healthy children of tuberculous parents. They come every afternoon, receive a simple but nourishing supper, in the morning a milk breakfast, and then they take a lunch in the school and return home every afternoon for dinner.

In **France** the children of tuberculous persons are under the surveillance of the dispensaries, which send them to holiday homes (Colonies de Vacances), and to the temporary homes of "l'Oeuvre de Préservation contre la Tuberculose (Oeuvre Gancher)". Adults and adolescents receive half-price railway tickets to enable them to return to the part of the country from whence they came.

In **England and Wales** the educational work done by voluntary agencies and statutory authorities, is vêry great. Efficient advice and instruction is given by Nurses and Health Visitors, by the distribution of literature, Tuberculosis Exhibitions, and the like. In one County, a Caravan, privately supported, makes tours, and from it demonstrations and lectures are given. Homes, Holiday camps, boarding-out in the country, and a growing number of open-air schools help weakly children. At all the Dispensaries such children are examined and sent, where possible, to open-air schools, which are under the supervision of the Medical Officer of the Dispensary, their homes at the same time being kept under supervision. Several such schools exist, and more are shortly to be opened.

In **Scotland,** says Mrs. Ogilvie Gordon, patients are advised as to the dangers of infection, and of the precautions to be taken. For poor patients who are to be treated in their own homes, beds and bedding are lent by local authorities, a sputum flask is given, separate eating utensils are provided, separate washing of the dishes and clothing is enjoined, disinfectant is supplied, and the use of it in washing floors, cloths, etc., is taught. Printed instructions on cards are placed on the walls, and the nurse or visitor in charge reports to the local Sanitary Authority whether the instructions are being properly carried out, or if removal ought to be insisted upon.

In **Sweden** the Swedish National Tuberculosis Association has two homes for the healthy children of consumptive parents. The children reside with their parents, a nurse lives in the house and gives instruction and advice as to cleaning, ventilation, etc. Through the Dispensaries healthy children are often boarded-out in families within easy reach of their parents.

Compulsory boarding-out is practised in **Denmark** if the home conditions of the children are injurious to health. In Denmark there are also several Children's Sanatoria for delicate and especially for tuberculous children.

In **Norway** (see Question 7) the Norwegian Women's Sanitary Association does much for the care of the children, and has erected several open-air schools and summer vacation Colonies for weakly children from the money raised by the sale of the "Mayflower". According to the Law of 1900, special arrangements are made for the cleansing of Norwegian schools.

Holland and **New South Wales** make special mention of the advice given by visiting nurses and health visitors, and Tasmania draws attention to the circulation of pamphlets and to the visits of Inspectors of Local Authorities. **Argentina** has Colonies for children who show a tendency to tuberculosis.

In **Great Britain** the introduction of medical inspection in the schools is proving a great safeguard for the children. The sanitary authorities keep in touch with the medical inspector of schools, and children who might be in contact with tuberculosis cases under treatment in the homes, are very carefully observed in the course of the school and medical examinations. The importance of sustaining a keen interest in the work of prevention is dwelt upon by the Association of Tuberculous Clinics in **New York** U. S. A. and is much helped by the "Nurses' Association", a body which includes all nurses working in these Clinics, and which holds monthly meetings. Among American institutions may be mentioned the open-air Schools, primarily intended for children suffering from Tuberculosis or predisposed to it, and the Children's Gardens in New York and elsewhere. The Children's Garden Playground movement is spreading rapidly in Great Britain and Ireland, and in Dublin and in London it is already doing good work.

These various methods of direct help to children, and of the educating of the community, are acknowledged to be of immense importance in the great work of raising the standard

of national health, and clubs for boys and girls, the Boy Scout movement, lawn tennis, hockey, in short, everything which leads children to spend time in the open air, indirectly helps to stamp out tuberculosis. The "Schools for Mothers" and Babies Clubs in England, Scotland and Ireland are valuable as giving opportunity for instruction to mothers of the poorer classes.

QUESTION XI

Is any provision made for the maintenance of dependents if the bread-winner is taken away to hospital, or while he or she is unable to work?

Under the Sickness and Invalidity Insurance Law in **Germany** every disabled person receives sickness or invalidity benefits, according to his former scale of wages. In place of money-benefits, if necessary, Sanatorium treatment is provided, in which case the Insurance Society must grant money to the family. Paragraph No. 187 of the Sickness Insurance Law says:

> "If hospital treatment is granted to an insured person who up till then supported or partially supported by his earnings a family or dependents, the same must receive a Haus-geld (house money) to the amount of half of the sickness benefits."

The Invalidity Law also provides the family or dependents with Haus-geld in the case of a disabled person being brought to hospital or Sanatorium. According to the new Imperial Insurance Law, which will come into force in 1912—13, and under which a larger circle of people will be compulsorily insured, greater provision will be made for the maintenance of families whose breadwinner is incapable of work through tuberculosis, or is taken away to hospital. And even then many cases will remain to be helped by private benevolent societies.

In **Great Britain and Ireland** there has in the past been no public provision for the maintenance of dependents of tuberculosis cases, except in the case of those entitled to Poor Law Relief. Under the National Insurance Act those who are insured are entitled to the following benefits while

the bread — winner is in hospital, viz: — for men who are insured.

1. Sick pay, 10s. per week for twenty-six weeks for a man, after having made full contributions to an Approved Society for 6 months. This scale of benefits applies to men over 21. Unmarried men, without dependents, between 16 and 21, and those becoming employed contributors when over 60, are entitled to 6s. a week for the first 13 weeks, and 5s. a week for the second 13 weeks of illness. Men joining between the ages of 50 and 60 are entitled to 7s. a week for 26 weeks.

2. Disablement pay of 5s. per week for sickness lasting for more than six months, this may continue till death or seventy, after having paid full contributions to an Approved Society for two years.

For Women who are insured: —

1. Sick pay at the rate of 7s. 6d. a week for 26 weeks if she is not well enough to work, for servants over 21. Those between 16 and 21 (if unmarried and without dependents) are entitled to 5s. a week for the first 13 weeks, and 4s. a week for a second period of 13 weeks. Women servants who become insured between the ages of 50 and 60 are entitled to 6s. a week for 26 weeks, and those over 60 get 6s. a week for the first 13 weeks and 5s. a week during the next 13 weeks.

2. 5s. per week during the whole of any illness longer than 26 weeks even if she is incapacitated for the rest of her life, after she has paid contributions to a Society for 2 years, and if she is over 21. Those under 21 receive 4s. a week disablement benefit.

Voluntary allowances to dependents have to some extent been available in the past through benevolent funds in various localities, connected with (a) Associations for the Poor, and the Charity Organisation Society; (b) the Provident Funds instituted by different professions, trades, friendly societies, employers and limited companies; (c) the Relief Funds attached to hospitals, dispensaries, or sanatoria; (d) the charitable agencies in connection with the different churches; etc., etc.

In **Denmark** (See Act 70, Sections 6 and 7) subventions may be granted to dependents of patients who are treated in hospitals acknowledged by the State. No such State subvention shall be regarded as Parish Relief. In **Norway**, according to the Invalid Insurance Law of September 18, 1909 (Section 16), a patient is supported up to 60 % of

his daily income for 26 weeks. According to Section 18, his family shall be supported up to 26 weeks in case of the bread-winner's stay at Sanatorium or Hospital. The Poor Law contains a similar provision.

In **France,** while the sick person is in hospital or sanatorium, his family receives help from the *Bureau de Bienfaisance* of the Municipality. Special help is also given through the *Assistance Publique,* from private charitable institutions, and from the benevolent funds of Sanatoria *(Caisses Amicales).*

The only provision in **Victoria** (Australia) is that, if quite incapacitated, the invalid pension may be granted, or children may be made State Wards boarded-out to their own parents. Private help and voluntary associations give aid in **Finland** (by the Armenkasse and Dispensaries), in **Holland, Russia and Tasmania** (by the Charitable Aid Board). Greece, Sweden, South Africa, and New South Wales reply to this question in the negative. In **Holland** money is sometimes given by voluntary associations. In **Argentina** a League against Tuberculosis helps the families of those who are in hospital, and the sick with medicine.

QUESTION XII

If the advanced cases are allowed to remain at home, what measures are taken to provide them with separate rooms, separate beds, and necessary nourishment?

This question is largely answered by **Germany** in No. 7. The Dispensary provides a bed if necessary, and sometimes rents a small room for the patient, or places a screen round the bed so as to lessen the danger of infectious discharge*. Beds and nourishing dinners are also provided through the Dispensaries in **Finland,** and in **Denmark** it is through the Dispensary that help is given. So also in the **United States** and in **Canada,** where milk and eggs are given by many dis-

* In practice tubercle bacilli have never been found higher up the wall than 3ft. (Paper on the Prevention of Tuberculosis. By Dr. Jane Walker Read at Toronto, 1909.)

pensaries to needy patients. **Sweden** provides fuel, baths, medicines, clothes, beds and other assistance to advanced cases allowed to remain at home, through the Anti-Tuberculosis Association.

The Central Association to Combat Tuberculosis in the towns of **Holland**, the Witte Kruis, and also the Groene Kruis in the country, endeavour to assist cases notified to them by the physicians. The Visiting Nurses try to arrange suitably the household of the patient, and the Central Association provides beds, bedclothes, a thermometer, and other necessaries free in many cases. If there is no separate room for the patient, the nurses advise removal, and if necessary pecuniary help is given. Everything possible is done to reduce the risk of infection to the family and neighbourhood.

The National Anti-Tuberculosis Association of **Norway**, and other associations connected with it, do all that is possible to secure separate rooms, and at any rate separate beds, bedclothes, and underwear, sputum flasks, etc. They also give necessary nourishment. In **France** the doctors, the dispensaries, and charitable institutions whenever possible induce patients to use separate rooms (there is no compulsory isolation). Private benevolence in **Germany** and **Russia** provides many patients with good nourishment, and in Russia endeavours to give beds. A little is also done in this way in **Greece**. So, too, in **South Africa** and in **Victoria**, in which State there are local benevolent societis. **Tasmania** gives assistance in a few cases. In **New Zealand** an advanced case would either be removed or treated by a physician at home. In **Sydney** (New South Wales) some useful work is done in the suburbs of the city in this direction by the local District Nursing Association, and in **Argentina** the League Against Tuberculosis attends to the necessary measures by means of special inspectors.

In **England and Wales**, most Sanitary Authorities, by the efforts of the visiting Sanitary Inspectors, or Health Visitors, are able by persuasion to procure some isolation of patients in their own homes. Private charity assists in the provision of beds, and extra nourishment, but such assistance of necessity can only meet a small percentage of cases. There are Societies which give weekly contributions to enable the family to move into a larger house. A few Poor Law Authorities give relief upon condition that the family live in a house large enough to admit of the isolation of the patient. Shelters are provided by some voluntary societies, for home use. All the existing voluntary dispensaries make

a special feature of looking after advanced cases in their own homes. The doctor gives medical attention, a nurse is provided, shelters and extra bedding are lent, and extra rooms are arranged for where patients cannot afford them themselves.

In Scotland the growing popularity of the Tuberculosis Dispensaries is doing much to render it possible to keep "older" contacts under supervision, and well instructed as to personal care in their own interests. In the Annual Report of the Local Government Board of Scotland for the year 1908 (pp. LXIV and LXV) the following statement is made: —

> "The Local Authority may, and, if the case is one that falls under Section 54 of the Public Health (Scotland) Act of 1897, are bound to isolate the patient, and if they do so, they must see that he is properly treated and maintained. They have no recourse against the Parish Council for any part of the cost. . . . . .
> . . . . . According to our view, the best arrangement in the general interest of the public is for the Local Authority to take charge of infectious cases among paupers and meet the whole cost of maintenance, treatment, and isolation. Where this cannot be done, an arrangement might be made under which the Local Authority would attend to and pay for the treatment and isolation, while the Parish Council provided maintenance."

Although this was the finding of the Local Government Board, it cannot be said that there has in the past been either security or uniformity as to the means of providing the necessary nourishment for patients attended at home. The local authorities throughout the country have provided separate beds and nursing, and when assistance was required in respect of nourishment, application might be made to the Poor Law Authorities; but if the case were ineligible, e. g., if the patient were the wife or dependent of an able-bodied man, and therefore excluded from Parish Relief, the only assistance to be had was from some of the voluntary or philanthropic agencies.

The working of the National Health Insurance Act will entirely re-cast the administrative relations, Under "the domiciliary treatment of tuberculosis" medicines, nourishment, and warm clothing can be given on the order of the doctor if necessary for "treatment", but not for the purposes of ordinary maintenance.

The following summary of the work done by the Dublin Samaritan Committee of the Women's National Health Association acting in co-operation with the Dispensary may be

quoted as showing how much can be done to minimise the danger of advanced cases if a Care Committee takes the charge not only of the patient but of the whole family in order to bring about more healthy conditions as regards having open windows, food, cleanliness and care on the part of the patient,

Summary of report of work done at P. F. Collier Dispensary (Dublin) during the year ending November 7th, 1912.

No. of cases who have attended Dispensary	1,176
Of these 79 have died. The remainder are under treatment or have been dealt with as follows: —	
Visits paid by Nurses	7,555
„ „ „ Doctors	508
Average weekly attendance at Dispensary	180
No. of Patients improved so much as to be able to return to work	26
„ „ sent to Newcastle Sanatorium	15
„ „ sent to other Sanatoria	63
„ „ sent to South Dublin Union Sanatorium	14
„ „ sent to South Dublin Union Hospital	13
„ „ sent to North Dublin Union Hospital	13
„ „ sent to Our Lady's Hospice	51
„ „ sent to Camden Row Hospice	2
„ „ attending who have been in Sanatoria	50
deaths at home	29
„ „ in Institutions	50
„ families removed to more healthy localities	10
„ rooms disinfected	218
„ insanitary houses reported	23
„ children in families of tuberculous patients who have been sent through Fresh Air fund to country	32
„ children sent to schools or institutions	20
„ each family, rough average	7
„ families occupying one room	676
„ families in which more than one person are affected	46
„ exposed cases, but not tubercular, sent to Sutton	30
„ cases sent to general hospitals for surgical and other treatment	20

Family examination

The examination of all members of families in which there is a tubercular patient is encouraged. 171 families have been examined at the Dispensary.

In 46 families other members, as well as the original patient, were found to be suffering from the disease.

QUESTION XIII

What measures have been taken to fight against the exaggerated fear of tuberculosis, which often hinders necessary measures being taken?

Practical steps are taken to dispel exaggerated fear of the disease in many countries. Stress is laid in **Germany,** wherever instruction is given on the danger of infection through the tubercle bacillus contained in the expectoration, to explain that the infection can be avoided, and that the disease is curable if medical advice is sought in its early stages. In many countries, notably in **Germany,** the **United States** and **Great Britain and Ireland** the Tuberculosis Exhibitions are recognised as a great help in dispelling exaggerated fears. Leaflets are distributed and lectures given in **Russia,** while in **Norway,** where no fear is recorded, the educational work which is going on all over the country may be regarded as having been preventative. In the neighbouring country of **Sweden** more than 200,000 copies of an excellent paper called "The Consumption Terror" have been circulated through Workmen's Associations, and at the lectures so widely given in towns and rural districts on Tuberculosis.

An excellent leaflet has been published in the **United States** by the National Association showing that in most cases the establishment of Sanatoria benefits the surrounding districts.

In **France,** it is stated, every effort is necessary to combat this fear. Workmen discharged from sanatoria are boycotted by their fellow workmen. The use of sputum flasks in workshops is made impossible to those desirous of continuing the hygienic practices learned in the Sanatoria. An attempt is made by friendly talks to dispel the dread felt and thus expressed. Popular lectures are found useful in **Tasmania,** and placards in **New South Wales.**

In **Holland** a special enquiry is being made by the physicians into the evidence of the alleged fear, but the results have not yet been published. In Greece and **Finland** the fear does not appear to exist, nor among the natives and coloured people in **South Africa,** whose indifference is attri-

buted to callousness. In **Queensland** and in **Argentina** reliance is placed on educational propaganda, conferences, the distribution of pamphlets, etc. etc.

In **England, Wales** and **Scotland** the more widely disseminated knowledge of the disease, and of its contributing causes, and early symptoms, together with the definite hope of possible cure, or at least arrest, has done much to modify the dread of a medical examination. The prospect of isolation, avoidance by friends, removal from business, are features from which all naturally shrink. On the other hand, people begin now to realise that it is far better to face full knowledge at once than to run those graver risks which neglect or delay might bring.

When the first Tuberculosis Dispensary was established in Ireland there were fears that the patients would be afraid to visit the Dispensary or to allow the nurses to visit their homes. But this fear has proved groundless and there has never been any difficulty. On the other hand there have been instances of extreme scare shown in Ireland based on entire misunderstanding.

QUESTION XIV

Can you give any figures showing the cost of treating

(a) Curable Cases?

(b) Hopeless Cases?

Dr. Bluhm gives a most interesting and careful reply to this question, from statistics which are available from the National Insurance boards of **Germany,** and the Krankenkassen. The latter pay the Insurance Societies the cost of treatment in their Sanatoria, as far as they legally may do so. The cost is about 4s. 2d. per day for females. In **France** it varies in both curable and hopeless cases, according to the treatment given. The Assistance Publique in Paris spends about five francs per day on a curable, and three francs per day on an incurable case. The cost for both classes of cases is the same in **Finland,** four to five shillings per day. In **Norway** the cost varies according to the character of the institution — from about 10 to 29 kroner (about 10s. 3d. to 30s. per week).

The following interesting figures for **Scotland**, show the cost per patient in institutions for the poorer classes, under private and official management. At Bellefield Sanatorium, Lanark, the average weekly cost per patient is about 31s. including cost of maintenance and management. At Lanfine House, Kirkintilloch, for the reception and isolation of advanced and curable cases, which receives patients without charge, the cost of maintenance is about £68 per bed per annum, or about 26s. per week. In a typical city hospital, under a Local Authority, where wards are set aside for advanced cases of tuberculosis, the cost per patient is about 13s. to 14s. per week for food, drugs (including tuberculin), etc., etc., but exclusive of any allowance for cooking, heating, repair of buildings, up-keep of grounds, for supervision by matron or for medical attendance. In certain parochial institutions the weekly cost of indoor treatment for phthisical patients is estimated at 14s. to 15s., including cost of maintenance and management.

The Departmental Committee on Tuberculosis, in their Interim Report, treat of the necessity of the constitution of more sanatoria, and state their opinion "that in the immediate future one bed in a sanatorium for every 5,000 of the population should be available." The cost of a sanatorium, though it must vary greatly should not exceed £150 a bed, while maintenance requires 25s. to 30s. per week. In **Ireland** most of the Sanatoria taking in insured patients charge £1, or £1 1s. a week:

In **New South Wales** it is stated that in the Queen Victoria Homes £50 per annum will support a bed. In a Government Hospital the cost if from £38 to £44 a year, including clothing, drugs, and railway fares. In **Tasmania** the average cost for maintenance is £1 a week. The cost is the same for both curable and incurable cases.

With the exception of **Greece**, where the expense of treating cases in a small hospital is estimated at about 1,800 drachma (about £70) per annum, no other countries give details with regard to cost.

In the Sanatoria of **Russia** the cost is estimated at from 15s. to 30s. per week, in the hospitals 15s. per week, in the Stations de Koumys about 30s. per week. The State pays a proportion of the cost of treatment, and every year makes a grant in order to provide free places for poor patients.

QUESTION XV

Have you tried any special treatment for advanced cases?

Germany, Holland and **Tasmania** reply that they have not tried any special treatment for advanced cases, nor has any special treatment been tried in **England and Wales** for such cases where the greatest experts consider that the treatment is practically the same for early as for advanced cases. An exception should be noted with regard to the Tuberculin treatment regarding which there has been considerable controversy, both as to its efficiency and as to the kind of tuberculin to be used. The general opinion of the medical profession is that it can be used with excellent results in selected cases by doctors of experience and with careful supervision. Dr. Carmac Wilkinson and his school advocate its more extended use at Dispensaries and some special Tuberculin Dispensaries have been established to carry out this system, and report very favourable results. The use of Tuberculin injections is also mentioned in the reports from **Norway, Finland** and **New South Wales.** In the **United States** the treatment with Tuberculin appears to be decreasing.

The Pneumo-Thorax treatment is used in **France, Finland, Russia, Denmark** and **Norway. Russia** also uses the "Treatment Symptomatique". The Union of Greek Women, through its Hygiene Section, treated 75 patients for two years. The treatment included inter-trachial injections of sterilised oil containing bi-sulphide of carbon, the same substance being also administered by mouth in the form of syrup, and in oil per rectum in cases of tubercular peritonitis and enteritis.

Of the patients of the first stage 100 % were cured. Of the second stage, all whom they could trace for years after had no return of the disease. Of the third stage, one bad case was living and at work under insanitary conditions four years later. This method of treatment is due to Dr. Koromilas, by whom it was also introduced into the Pear Hospital in Paris, where it is exclusively in use with excellent results, according to the last account received by the Union of Greek Women.

In **England and Wales** up to 1910 four hundred cases healed in this way had been reported, and during the last two years many more have been added. The remedy is somewhat

heroic, and is applicable to advanced cases only when the ordinary methods of Open Air treatment need to be supplemented. This method of treatment appears to hold out a good deal of hope in cases of severe hoemoptysis. It must be remembered that only persons who have one sound lung can be treated by this method and this reduces the possible number very much.

(For further literature on the subject Mrs. Edwin Gray refers to an article in "The Practitioner" for September 1911, by Dr. S. V. Pearson, to the article on Artificial Pneumothorax in Latham & English's "System of Treatment," by Drs. S. V. Pearson and Claude Lillingston, and to a paper read by Dr. Esther Carling before the Registered Medical Women's Association, London.)

The crux of the whole treatment of Tuberculosis is the advanced case, and by this method, as well as by several other measures still on their trial, the outlook is far more hopeful than it was formerly thought to be.

In **New Zealand** secondary infections are treated with bacterial vaccines.

QUESTION XVI

Is there a system of National Insurance affecting tuberculosis patients? If so, state in detail how it works and how it is financed

Dr. Bluhm sends full details of the **German** Imperial Insurance Act, under which tuberculosis patients benefit in a high degree. Part. I. Sickness Insurance, and Part III, Invalidity, Old Age and Death Benefits, bear upon this subject. As far as possible employed persons whose salaries do not exceed 2,500 marks (about £120) come under this law. The insurance is paid by the Krankenkasse, which has offices in different districts and works under the supervision of the State, the employer, and the employee. One-third of the cost of insurance is paid by the employer, and two-thirds by the employed person. The Sick workman receives free medical attendance and sick pay from the third day of illness, commencing in proportion from one-half to three-quarters of his daily

wage. In the case of death the dependents receive death benefits. From the year 1913, when the new Insurance Act comes into force, a much wider circle of insured persons will be reached, and expenses will largely increase. Under Part III the insured person if he is permanently disabled, in a legal sense, will receive Invalidity Benefit. He will also receive, without being permanently disabled, a so-called Sickness Benefit, from the expiration of the 26 weeks of disablement. The Sickness Insurance lasts till the expiration of the 26 weeks. To prevent Invalidity among the labouring classes, the Insurance Committee have erected numbers of Sanatoria, Hospitals, Dispensaries, Preventoriums, etc. etc.

A great part of the funds of the Insurance is spent upon the improvement of Artisan dwellings, numbers of Sanatoria, Hospitals, Dispensaries, Preventoriums, Artisan, Dwellings, Holiday Homes, etc. Among Sickness Benefits we note the gift of artificial teeth. Tuberculosis is a chief cause of invalidity, and a lowering of the death-rate of open pulmonary phthisis and tubercular laryngitis, can alone prevent the spread of infection. The prevention of tubercular infection through advanced cases is chiefly hindered by treatment in the early stages, and the transmission of the disease can be limited by measures of isolation. Finally, Dr. Bluhm emphasizes the need of awakening a deep sense of responsiblity in all classes, not only towards the living but towards the coming generations.

In **France** there is no National system of insurance, but a Law with regard to the assistance of chronic invalids obliges the Communes to pay a monthly allowance to incurable cases of tuberculosis. This amount varies in different Communes. In Paris it is 30 francs a month. Those officially employed receive a proportionable retiring allowance, and the various Benevolent Societies complete the assistance necessary in each case.

Although **Norway** has no system of National Insurance, a patient is supported up to 60 % of his income for 26 weeks (See Question 11).

In **Great Britain and Ireland** the National Health Insurance Act (1911) makes special provision for the treatment of tuberculosis patients (cf. answers to Questions 7, 11). Under this Act Tuberculosis Dispensaries and Sanatoria are being established all over the country and Hospitals for advanced cases where insured persons will receive suitable treatment. In England and Wales and Scotland, free medical attendance will

be given when recommended by Insurance Committees. A weekly sickness benefit will be allowed from the fourth day of sickness (See Question 11). Insured persons must notify their sickness from the first day of their being off work on that account. This system will affect about 13,000,000 of the working men and women in Great Britain between the ages of 16 and 70, and will greatly facilitate the work of the public health authorities in reaching tuberculous cases in the earliest stages of the disease. The vigilance exercised both by approved societies for State Insurance and by public authorities will bring the homes of sick persons directly under notice, and permit of safeguards against infection being taken without delay.

Insured persons and the employers of insured persons pay weekly contributions to the National Health Insurance Fund, the joint contribution amounting to 7d. for a man and 6d. for a woman in Great Britain. Monies provided by Parliament are also paid into this Fund, the whole of which is under the control and management of the National Health Insurance Committee appointed by Parliament who will also establish Research Institutions. From this Fund, after deduction of administration expenses, the benefit monies are provided. For the treatment of tuberculosis, the financial arrangements under the Act are as stated in answer to Question 5.

In **New Zealand** a scheme on the lines of the National Insurance Act of Great Britain is in embryo.

There is no system of National Insurance in **Australia**, but the Commonwealth allows an invalid pension of 10s. a week to a breadwinner incapacitated by phthisis.

APPENDIX A

MEMORANDUM

ON THE

PROBLEM OF ADVANCED CASES OF TUBERCULOSIS IN THE UNITED STATES

by Dr. Livingstone Farrard, Executive Secretary of the National Association for the Study and Prevention of Tuberculosis

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The information given in the following report from the United States of America could not be put under the different headings in the main portion of the book, as the Convener of the International Standing Committee on Public Health was only able to obtain the report after the book was already in the press by the courtesy of Dr. Farrard, who prepared this memorandum specially for this publication.

(Paragraphs are numbered to correspond with the questions on the blank received from the International Council.)

1. Death rates in the United States must be calculated from the mortality figures obtained by the U. S. Census. Such vital statistics are received only from the "registration area" which covered 58,3 % of the population of the country in 1910. Vital statistics from the rest of the United States are not available and can only be estimated on the basis of figures from the registration area.

The following table gives a comparison of the death rate from tuberculosis (all forms) and the death-rate from all causes of death in the registration area, United States, for each 100,000 population, 1901 to 1910 inclusive. (From data abstracted from the Annual Mortality Reports of the Bureau of the Census.)

Year	Tuberculosis Death Rate	Death Rate all causes
1901	196.9	1656.0
1902	184.7	1594.1
1903	189.0	1611.8
1904	201.6	1663.9
1905	193.6	1616.0
1906	180.2	1567.5
1907	178.5	1597.1
1908	167.6	1478.0
1909	160.8	1440.0
1910	160.3	1495.8
Decrease in death rate	18.7 %	9.7 %

Additional figures for Tuberculosis of the lungs as well as for all forms of the disease are as follows: —

	Annual Average 1900—1909	1906	1907	1908	1909	1910
Tuberculosis of Lungs						
Deaths	60 692*	65 986	67 014	68 074	70 844	73 214
Death Rate	161.0	157.1	155.9	145.5	139.3	136.0
Tuberculosis (all forms)						
Deaths	68 693	75 648	76 759	78 409	81 835	86 309
Death Rate	183.0	180.2	178.3	167.6	160.8	160.3

Additional information may be found in Bulletin 109 of the Bureau of the Census, entitled Mortality Statistics—1910.

2. A comparison of the death rate from tuberculosis with the death rate from other diseases can be made from the accompanying table:

Deaths and Death Rates for certain communicable diseases 1906—1910 (For registration area only).

	1906	1907	1908	1909	1910
Typhoid Fever Deaths . . .	13,160	12,670	11,375	10,722	12,673
Death Rates	31.3	29.5	24.3	21.1	23.5
Malaria Deaths	1,415	1,166	1,109	1,175	1,167
Death Rates	3.4	2.7	2.4	2.3	2.2
Smallpox Deaths	95	74	92	79	202
Death Rates	0.2	0.2	0.2	0.2	0.4

* The above figures are for the »registration area« only, which in 1910 = 58.3 % of the population of the United States.

	1906	1907	1908	1909	1910
Measles Deaths	5,087	4,302	4,611	4,860	6,598
Death Rates	12.1	10.0	9.9	9.6	12.3
Scarlet Fever Deaths	3,227	4,309	5,577	5,781	6,255
Death Rates	7.7	10.0	11.9	11.4	11.6
Diphtheria and Croup Deaths	10,793	10,154	10,052	10,358	11,521
Death Rates	25.7	23.6	21.5	20.4	21.4
Influenza Deaths	4,320	10,066	9,989	6,649	7,774
Death Rates	10.3	23.4	21.3	13.1	14.4
Whooping Cough Deaths	6,324	4,856	4,969	4,906	6,146
Death Rates	15.1	11.3	10.6	9.6	11.4

3. Information as to the incidence of tuberculosis as it affects sexes and different ages can be obtained from the special report of the U. S. Census, published in 1908* from which the following table is taken.

Death rates, by sex, for the registration area and registration states (aggregate, urban, and rural) from tuberculosis of the lungs: 1900 and 1890.

Area	Number of Deaths from Tuberculosis of Lungs per 100 000 of population					
	15 to 44 years		45 to 64 years		65 years and over	
	1900	1890	1900	1890	1900	1890
Registration area	252.4	320.1	232.5	319.3	260.1	369.0
Males	265.3	324.5	290.7	384.5	293.9	410.0
Females	239.5	315.7	173.1	254.8	230.0	332.3
Registration States	239.8	324.8	208.4	310.2	246.6	360.5
Males	251.5	327.0	253.1	372.1	269.0	381.1
Females	228.2	322.7	163.6	250.5	226.2	341.9
Cities	276.8	380.7	257.9	389.1	264.2	401.3
Males	311.2	404.5	337.2	487.1	333.5	458.8
Females	243.9	358.2	181.8	296.5	210.3	356.2
Rural	179.1	227.4	151.4	212.3	233.6	330.7
Males	158.1	197.1	160.6	232.5	228.0	331.3
Females	201.1	258.2	141.6	192.4	239.4	330.2

* "Tuberculosis in the United States", prepared for the International Congress on Tuberculosis, Washington, 1908, by the Bureau of the Census (S. N. D. North, Director), Department of Commerce and Labour.

4. No definite statistics can be given for the United States showing the amount of invalidity or inability for work caused by tuberculosis. The most important observations have been made in the city of Cleveland, Ohio, but have not yet been published. These figures, based upon extraordinarily complete notification and registration of tuberculosis, indicate that there are in that city at least eight living cases for every death from the disease. Another valuable report is the Economic Study of 500 Cases of Consumption in Boston, by Dr. Edwin A. Locke and Dr. Cleaveland Floyd*. The following tables and extracts taken from this Study are of interest as showing the unfortunate influence of Tuberculosis on the family of the victim.

Family and Family Income.

Number without family or dependents	78
Number with family or dependents	422
Average number in family	4.39
Total weekly income families before onset of illness	$ 6 807.29
Average weekly income families before onset of illness	$ 17.50
Total weekly income families after disability of patient	$ 3 055.60
Average weekly income families after disability of patient	$ 7.86
Total number families without income after disability of patient	161
Total weekly income families of same group before disability of patient	$ 1 877.75

"Of the 500 patients the average duration of the disease in the 244 who died was approximately two years and one month, and of the 256 living May 1, 1911, two years and ten months. These averages are somewhat smaller than those ordinarily given. But from a study of 1000 cases treated at the Adironack Cottage Sanatorium who subsequently died, it was found that the average duration was as follows: — Incipient stage, about eight years; moderately advanced stage, between five and six years; far-advanced stage, a little over four years."

"Reference to the following table shows that of the 500 cases all the 244 who died and 251 of the 256 living on May 1, 1911 finally reached a condition of complete disability."

* An Economic Study of 500 Consumptives treated in the Boston Consumptives' Hospital by Edwin A. Locke M. D., and Cleaveland Floyd, M. D. Reprinted from the Transactions of the Seventh Annual Meeting of the National Association for the Study and Prevention of Tuberculosis.

Duration of Disease and Loss in Wages

500 Male Consumptives	Number	Average Duration of Disease	Number giving up work	Average time of Onset to complete disability	Average time of complete disability	Average rate of wages lost	Total loss in Wages
Dead	244	Weeks 98.82 (To May 1 1911)	244	Weeks 39.89	Weeks 58.03	Per week $11.89	$170.965
Living	256	145.38	251	56.08	89.30	$11.38	$255.074
Totals	—	—	495	—	—	—	$426.039

Further information can be obtained from a Study by Professor Irving Fisher*.

5. Legislation in the United States with regard to tuberculosis differs in the various States. The Federal Government has little control over health matters and Federal legislation is, therefore, unimportant. A summary of the tuberculosis legislation in the various States up to 1911 will be found in the Tuberculosis Directory, but would be too lengthy for the purposes of this memorandum. Of recent legislation, the most important is a law passed by the Legislature of the State of New Jersey** in 1912, providing for county hospitals for tuberculosis in that State and for the compulsory segregation of certain classes of cases if necessary, from which the following clauses are quoted:

"9. It shall be the duty of the State Board of Health from time to time to make rules and regulations for the care of persons suffering with tuberculosis, and for the prevention and spread of that disease . . . . . The duty of enforcing said rules and regulations and seeing that they are enforced shall be upon the State Board of Health, for which purpose the State Board of Health may issue orders to local boards of health and practising physicians.

10. It shall also be the duty of every local board of health to enforce said rules and regulations.

11. If any person fails to obey any of the said rules or regulations, the offender may be committed to the County hospital by any judge of the Court of Common Pleas, upon proof of service upon the offender of said rules and regulations, and proof of violation thereafter. The court may also make such order for the payment for care and treatment as may be proper. After commitment such person may be discharged by the said court at any time when said court thinks it proper so to do.

12. Any person so committed to such country hospital who fails to remain there, or who neglects or refuses to obey the rules and regulations of that institution, may be when in the judgment of the superintendent it is necessary, isolated or separated from other persons and restrained from leaving the institution.

* A revised Estimate of the Economic cost of Tuberculosis, by Irving Fisher, Ph. D. New Haven, Conn.

** Chapter 217. An act concerning Tuberculosis, enacted by the Senate and General assembly of the State of New Jersey. Approved March 28, 1912.

17. When cases of tuberculosis are reported to the State Board of Health as now or hereafter provided by law it shall be the duty of the State Board of Health by its officers or those of the local board of Health to investigate such cases for the purpose of ascertaining whether the rules and regulations of the State Board of Health as to the care and treatment of persons suffering with tuberculosis, and for the prevention and spread of the disease are being complied with."

The Tuberculosis Law of *New York State** may also be regarded as of importance. It regulates Reports by physicians and others, examination of sputum, protection of records, disinfection of premises, direction of disinfection, cleansing or renovation by health officer, prohibition of occupancy until order of health officer is complied with, prohibition of carelessness of a person having tuberculosis, protection of patient's family, reporting recovery of patient, etc. etc.

6. In a general way in the United States there is some distinction made in the public provision for early and advanced cases of the disease, but this distinction is becoming less and less notable. The sanatoria, so-called, are supposed to admit only early and curable cases, while most of the hospitals erected by counties and municipalities, while intended primarily for the more advanced cases, have been forced by circumstances, as a matter of fact, to admit many early cases. The tendency now is to make less distinction in the provision for early and advanced cases, except for those far advanced cases which are in a hopeless or dying condition. The only basis of clinical distinction is the classification adopted by the National Association for the Study and Prevention of Tuberculosis**, which includes and amplifies the Turban classification of individual cases.

7. At the present time, with the exception of the New Jersey law referred to above, there is no legislative provision for the isolation of advanced cases of tuberculosis. A few cities isolate incorrigibly careless cases, but only to a slight extent. This is true particulary in New York City and San Francisco. The sentiment in favour of segregation of incorrigible and dangerous cases is growing and there will undoubtedly be additional legislation to that end in several States during the next two years.

8. There is some difficulty in persuading advanced patients to go to public institutions, but not as much as had been

* Laws of New York. Chap 351. Became law May 19, 1908.

** Report of the Committee on clinical nomenclature. Reprinted from the Transactions of the Fourth Annual Meeting of the National Association for the Study and Prevention of Tuberculosis.

anticipated, provided the hospitals in question are situated relatively near the homes of the patients. It is becoming increasingly clear that the location of hospitals is a point of prime importance and particularly so for advanced cases. The institutions should be located near the centres for which they are intended to provide. There is also much to be desired in the standards of maintenance in the hospitals for advanced cases that are now in operation in the United States. An inquiry is under way by the National Association for the Study and Prevention of Tuberculosis with a view to formulating standards of maintenance for advanced case hospitals with the idea of making it possible to hold the patients in such institutions with less difficulty than is now the case.

9. The education of advanced cases and those living with them is one of the main points in the programme of all our voluntary Societies for the Prevention of Tuberculosis and of the visiting nurse work in connection with special dispensaries, which now exist in nearly all cities of the United States. It is impossible to speak of these in any other than a general way. The visiting nurse system is growing rapidly and the tuberculosis class system is also operating successfully in many places. The instruction of the patients and their families is always emphasised in every instance.

10. There are no general or universal measures in existence to protect the children of patients from infection, other than the general education mentioned above. The number of outdoor schools and classes for anaemic children or those exposed to infection is increasing rapidly. There is also a tendency to establish so-called preventoriums for children of this class. The movement for the last named institutions has not proceeded far enough to warrant comment.

Provision for families of tuberculous patients, when the wage earner is disabled or at an institution, is left to the organised charitable societies and, except in exceptional instances, is not regarded as a function of the anti-tuberculosis organisations. This is, undoubtedly, a problem of importance. An interesting experiment dealing with this problem of care of patients and their families under crowded city conditions is the so-called Home Hospital, established during the past year in New York by the Association for Improving the Condition of the Poor, where entire families are received. It will be found described in a paper by John A. Kingsbury*, from which the following is extracted.

* "A Home Hospital for Tuberculosis". A new Experiment in the Treatment of combined Poverty and Tuberculosis. By John A. Kingsbury, New York.

About twenty families were moved into the beautiful East River Homes, more familiarly known as Vanderbilt Tenements. Here the tenement dweller may get air really quite fresh. Besides the families are provided with good and abundant food. There is constant medical oversight in the Home Hospital. It is not necessary for the patient to work, but he is permitted to do so by direction of the physician. Under the circumstances the patients ought to be free from worry. They keep their own household and the healthy members of the family follow their usual occupations and contribute to the maintenance of the household.

"In this experiment then, it is proposed—first to give adequate relief and wise treatment to a number of needy families in which there is tuberculosis, and secondly, in so doing, to find out whether it is possible, in a sanitary tenement, under skilful medical direction and constant nursing oversight, with adequate relief and freedom from undue worry, ample fresh air and sunshine, and room for reasonable segregation. —

(1) To prevent the spread of tuberculosis from the sick to the well members of the family, and particularly to protect the children from infection.

(2) To cure many of those in the early stages of the disease.

(3) To afford reasonable improvement and to restore at least partial earning capacity to patients whose cases are only moderately advanced."

"We have proceeded slowly and selected our families with great care. Consequently, we have to date only admitted seventeen families, (out of a possible total of 22) consisting of thirty-one adults and fifty-two children, a total of eighty-three individuals. There are seventeen positive cases of tuberculosis, all adults: nineteen suspected cases under observation, fifteen being children and four adults. Of the positive cases eight are mothers and nine are fathers, all being wage-earners. One is a third-stage case, four are second-stage cases, ten are incipient cases, and two are said to be arrested.

The families participating in the experiment thus far have been for some time under the care of our Relief Department and dependent because of Tuberculosis. The following indicates the type of families chosen for the experiment:

1. Families whose combined disease of poverty and tuberculosis was regarded as still in a hopeful stage, not strictly incipient, but still early cases of poverty and tuberculosis, were given preference.

2. Families thought to possess sufficient intelligence and willingness to co-operate in the scheme of rehabilitation.

3. Families whose dependency was due chiefly to the illness of a wage-earner was the third consideration.

4. Families in which the mother's illness made it impossible or inexpedient for her to keep the home and children in proper condition to secure immunity from the disease."

"This experiment is not intended to demonstrate something to take the place of hospital segregation or sanatorium treatment, but to prove that even in a crowded city — given proper housing, sufficient food and sanitary supervision, it is possible to check the spread of tuberculosis and to treat the disease with a reasonable measure of success."

12. A specific answer to this question cannot be given. In certain localities, where the charitable provision is fairly adequate, individual steps are taken to improve the patient's accommodation in the home. In a general way, the experience of our societies in providing additional nourishment for patients in the homes has not proved successful.

13. In all our campaigns throughout the country the unreasonableness of phthisiophobia is kept in mind and made a point for public discussion. It seems to be becoming less important as an obstacle than was the case a few years ago.

14. In a detailed study of the cost of maintaining tuberculosis sanatoria and hospitals, made by the National Association and dealing with thirty representative institutions in different parts of the country, the cost of maintenance varied from $0.946 per day per patient to $2.555 per day per patient. In round figures the cost seems to run about $10.00 a week with a tendency to reduction as the institutions become older and experience progresses.

15. The clinical treatment of advanced cases is always in the hands of the medical staff of the institutions. No special treatments of value can be reported.

16. There is no system of national insurance affecting tuberculous patients in the United States.

In conclusion, it should be repeated that the official problem in the United States is not Federal, but State and Local. Hitherto, the educational campaign has been conducted almost entirely by voluntary organisations led by the National Association, which has now over 800 affiliated societies in all parts of the country. The aim of these societies has been not only to educate the people with regard to tuberculosis and its prevention, but to create public sentiment which would procure the establishment of institutions and dispensaries by official provision and under official supervison. In the earlier

days of the campaign our institutions were almost entirely private; today the opposite is the case and the majority are public in character. The growth of the movement can be seen in the fact that in 1905 there were 111 hospitals and sanatoria in the country, while our latest records show 525 in existence to-day. Similarly, in 1905 there were 18 special tuberculosis dispensaries, while to-day we have record of 400. In 1905 there were no outdoor schools in the United States, while to-day there are 200.

It is needless to say that any further information which the National Association can furnish is entirely at the disposal of the International Council of Women.

APPENDIX B

THE ELEVENTH ANNUAL REPORT OF THE EXECUTIVE COUNCIL OF THE CANADIAN ASSOCIATION FOR THE PREVENTION OF TUBERCULOSIS

by J. Geo. Adami and G. D. Porter

As can be seen by the perusal of the various reports embodied in our Annual Report, much work in the campaign against Tuberculosis has been done throughout Canada during the past year. Direct reports from nine provinces show that the efforts put forth have increased in nearly all of them.

In **British Columbia** the splendid new Sanatorium at Tranquille accommodating over 100 patients was formally opened this year. Only those engaged in the arduous task of interesting the public and the governments sufficiently to raise the necessary funds for such a purpose can form any idea of the labour involved, and the British Columbia Society deserves every praise. Besides this every hospital there receiving Government aid must make some provision for the tuberculous thus placing British Columbia in this regard ahead of the other Provinces.

Reports from **Alberta** show an anxiety on the part of many for something practical being done at an early date, and it is our hope that something may be accomplished during the coming year.

In **Saskatchewan,** the various local leagues organized during the past year sent representatives to Regina, where a Provincial Association was formed. It is their immediate

purpose to start a sanatorium for the tuberculous, and towards that end the Provincial Government has promised twenty five thousand dollars. Education by means of lectures and literature has also been carried on during the year.

In **Manitoba,** the Sanatorium at Ninette has been formally opened, and is now in full running order and receiving patients. In Winnipeg a temporary home for advanced cases is under way and much education has been done in the city and throughout the Province. We are pleased to have this active Association now affiliated with the Canadian Association.

In **Nova Scotia** much in an educational way has been done throughout the Province. Tuberculosis has now become a notifiable disease. Especially noteworthy is the book upon Consumption and its Prevention, issued by the Tri-County League. It is their purpose to distribute some 50,000 copies of these books, free of cost, throughout the northern part of Nova Scotia. A new idea for raising the necessary money for the books, is the inclusion of local advertisements. Besides this, County and Town Councils materially assisted in the work. In Halifax a lot has been accomplished in looking after the tuberculous poor, and also in the matter of education, by the Halifax County Anti-Tuberculosis Society. A much-needed hospital for advanced cases in that city is now projected. In Kentville, the Sanatorium, which is always full, is proving of much benefit to the community, and we learn with pleasure that it is to be enlarged and better equipped. In Sydney the Ladies' Auxiliary has united with the Daughters of the Empire in supporting a visiting nurse. The various other leagues in the Province are more or less active, Colchester still doing active and most useful work with its visiting nurse and educational lectures and literature.

In **Prince Edward Island** the Charlottetown dispensary is operating satisfactorily, and the hope is expressed that some accommodation will soon be provided on the Island for the tuberculous.

In **New Brunswick,** following the recommendation of the Commission appointed last year to study the Tuberculosis question, they are planning for a sanatorium in the province. In St. John the society operate a dispensary, employ a visiting nurse and have held many public meetings. The local leagues in other parts of the Province, Fredericton and Moncton are also doing something towards helping needy cases in their localities, and in an educational way.

In **Quebec**, besides the institutions at Montreal, St. Agathe and Lake Edward, and the opening of the new dispensary in Quebec City, the most noteworthy thing during the year is the report of the Royal Commission upon Tuberculosis. This report strongly urges a vigorous Educational Campaign and advocates such measures as obligatory notification, disinfection, rules against spitting in public, Anti-Tuberculosis dispensaries, proper isolation and provision for the sufferers. Medical inspection of schools and industrial establishments, sanitary dwellings and the prevention of alcoholism.

The work in **Ontario** has shown a decided advance during the year. That local Sanatoria are a necessary part of the Campaign is gradually being recognized throughout the Province. In Hamilton, Ottawa, London and St. Catherines we have examples of what such institutions may accomplish. Local sanatoria are now projected in Brantford, Guelph, Windsor, Chatham and Kingston and Waterloo County. The dispensaries now open in various parts of the province, with the visiting nurses in connection with them, are proving their worth. An increased interest in the work among tuberculous children is being shown. Especially noteworthy is the new Preventorium and school for tuberculous children at the Mountain Sanitorium, Hamilton, and the new "Heather Club" Pavilion on the Lake side grounds, Toronto. The Royal Alexandra Sanatorium in London, has given a splendid impetus to the work throughout the Province. We are pleased also to note that the Toronto City Board of Health is taking such active measures against Tuberculosis.

In thus briefly reviewing the later efforts of the affiliated Societies of the Canadian Association, it must not be forgotten that some of the most substantial work is being done by the older associations, such as those in Hamilton, Ottawa, Montreal, etc., and we should also like to take this opportunity of congratulating The National Sanatorium Association, which although not in affiliation with us, has been carrying on a great work in Gravenhurst and Weston during the past decade and to extend also to that organisation our sympathy for the loss sustained by them in the fire at Weston.

Under amendments of the Ontario Public Health Act, physicians are now required to make returns to the Chief Health Officer of "All diseases dangerous to the public Health". This includes Tuberculosis; and the statistics thus obtained should prove useful to the Health Authorities in working for the control of this disease. The Ontario Govern-

ment is to be congratulated for its part in educating the public in the Prevention of Tuberculosis by the travelling Exhibit under the Provincial Board of Health. This has been in a large number of towns and villages during the winter where lantern demonstrations have been given and lectures delivered. The Provincial Government has encouraged the erection and maintenance of County and Municipal Sanatoria, by its generous treatment of such institutions ($ 3.00 per week, instead of $ 1.50 per week, being now set aside for the maintenance of those patients not paying above $ 4.90). As will be seen in Dr. Bruce Smith's report, 1372 patients were admitted to the special Hospitals or Sanatoria for the treatment and cure of the tuberculous during the past year, besides the many treated in the various local dispensaries in the province. It is worthy of mention also that the Public School Hygiene now has a chapter upon Tuberculosis.

That all these efforts are proving useful cannot now be doubted. The mortality from Tuberculosis is declining in Ontario. In the decade preceding 1899 the death rate from this disease was on the increase until in that year the figures amounted to 3,405 (a rate of 1.4 per 1,000 living estimated population, or, in other words, 11.8 per cent. of the total deaths.)

Decrease in Mortality

During that time there were no institutions for the tuberculous in the Province, no dispensaries, no special visiting nurses, no educational agencies at work, no general information regarding the prevention of this disease. In 1899 there was only one institution; now there are twelve of them in the Province, and others projected, four dispensaries and an increasing number of visiting nurses, while a general campaign is being constantly carried on. In 1908 the deaths from Tuberculosis were 2,511 (a rote of 1.1 per 1,000, or 7, 6 per cent. of the total deaths.)

We think it only fair to assume then, that this decline from 11.8 per cent. to 7.6 per cent is due, at least in some measure, to the efforts already put forth to stamp out this disease. And if so, we feel justified in looking for a still further decrease in the death rate, if accommodation could be provided for the tuberculous, especially the advanced cases, and still more done to enlighten the public regarding the means of preventing this wide-spread, but controllable disease.

Throughout the whole Dominion therefore, interest in the subject has been growing steadily. The question was freely discussed at more than one of the sittings of the Conservation Commission and we hope that through the Commission the Federal Government will see its way to give yet further and material support to the campaign against Tuberculosis. Much literature has been sent out by our own Association during the year. The new posters have been printed as well as the revised leaflet of which many thousands have already been distributed. 8,000 of our Annual Reports in English, and 2,500 in French have also been distributed. We are pleased to note that our President Dr. Adami, and Dr. Prevost were appointed by the Dominion Government and Dr. Hodgetts by the Conservation Commission, as delegates to the seventh International Congress to be held in Rome from the 24th to the 30th of September, 1911.

The lectures, 55 in number, delivered during the year by our Secretary, have as a rule been largely attended, as have those also of our French lecturers, Dr. Valin and Dr. Bourgeois.

APPENDIX C

SOURCES OF INFORMATION

Argentina.

Report: Dr. José Maros Perez, Secretary, The Argentine League against Tuberculosis (Liga Argentina contra la Tuberculosis).

Yearly Statistics published by the Municipal Authorities.

Canada.

Report by Mrs. Shorte, 5, Marlborough Avenue, Ottawa, Ontario.

Report of the Royal Commission on Tuberculosis: Province of Quebec, 1909—10. Secretary; R. Rudolph Roy.

Eleventh Annual Report of the Canadian Association for the Prevention of Tuberculosis. 1911.

Women Workers of Canada. 1912.

Denmark.

Correspondent: Fru Johanne Meyer, Bulowsvej 32b, Copenhagen.

Report from Professor Carl Lorentzen, M. D,, Chairman of the Executive Committee of the National League for the Prevention of Tuberculosis.

An Act for the Prevention of Tuberculosis, 14th. April 1905.

An Act referring to Staate Subvention to Hospitals for Tuberculosis, and for the treatment of patients in such hospitals.

14th. April, 1905. Acts 69 and 70 (printed in English).

Reports:

of the National Association for the Prevention of Tuberculosis in Denmark to the International Anti-Tuberculosis Congress in Washington in 1908 (printed in English).

The best evidence of effective work in the prevention or relief of Tuberculosis by any voluntary association since the last International Congress in 1905 (X. c.).

The best exhibit of Laws and Ordinances in force June 1st., 1908. for the prevention of Tuberculosis by any State or Country, the United States excluded (X. e).

The Society engaged in the Crusade against Tuberculosis having the largest membership in relation to population (X f).

The plans which have been proven best for raising money for the Crusade against Tuberculosis.

La Fleur d'Automne par CHR. JENSEN, Directeur Gerant de la Ligue Nationale pour la lutte contre la Tuberculose.

La Lutte contre la Tuberculose, par CH. JENSEN.

Measures Against Human Tuberculosis in Denmark. Report presented to the International Congress, Washington, 1908, by MR. HOLGER, Rordam (O. C. Olsen & Co., Copenhagen, 1908).

England and Wales.

Annual Report of the Local Government Board.

Report of the Registrar-General of Births, Deaths and Marriages.

Much assistance has also been given by Medical Officers of Health, Women Sanitary Inspectors and Health Visitors and Poor Law Guardians; by the British Institute of Social Service (4, Tavistock Square, London, W. C.); the National Association for the Prevention of Consumption (List of Sanatoria, etc.), and by its Oxfordshire Branch; by the Secretaries of the Ranyard Nurses (25, Russell Square, London, W. C.) and of the Tuberculosis Dispensary Lague (10 Ovington Gardens, London, S. W.); by the National Health Society (53, Berner's Street, London, W.), and the Firs Home for Advanced Cases of Consumption at Bournemouth; by the Central Fund for the Promotion of the Dispensary System for the Prevention of Consumption in London (23, Savile Row, London, W.); by several Voluntary Associations for the Care of Consumptives and the Prevention of Consumption and General Health Improvement; and also by Members of the Public Health Sectional Committee of the National Union of Women Workers, and Secretaries of many N. U. W. W. Branches;

Members of the Charity Organisation Committee in different parts of the country (Central Office: 296, Vauxhall Bridge Road, London, S. W.); District Nursing Associations, and Members of the National League for Physical Education and Improvement.

The Class Method of Treating Pulmonary Phthisis. By MARION B. ANDREWS, M. D. (DOLLARD, Printinghouse Dublin, Ltd., Wellington Quay) Homes for Advanced Consumptives. Tract issued by the National Association for the Prevention of Consumption, and other forms of Tuberculosis. (20, Hanover Square, London, W.)

Finland.

Report of DR. ELLEN AHLGIRST, Annegaten 12, Helsingfors.

La Lutte contre la Tuberculose en Finland, par RICHARD SIEVERS, President of the Council of the Anti-Tuberculosis League. 41 pp. Illustrated. 2 maps.

France.

Report of DR. GIRARD MANGIN. Statistics taken from those published by the Minister of the Interior.

Reports of Institutions.

Germany.

Report of FRÄULEIN DR. MED. AGNES BLUHM.

For Question 1, 2 and 3.

Medizinalstatistische Mitteilungen a. d. Kaiserlichen Gesundheitsamt. Berlin, Julius Springer.

Preußische Statistik, Berlin.

For Question 4.

Die Jahresberichte der Landesversicherungsanstalten für das Jahr 1910.

Die Krankheits- und Sterblichkeitsverhältnisse in der Ortskrankenkasse für Leipzig und Umgegend, bearbeitet im Kaiserlichen Statistischen Amte. Berlin, Karl Heymann, 1910.

For Question 5.

Kirschner, Die gesetzlichen Grundlagen der Seuchenbekämpfung im Deutschen Reiche. Jena, Gustav Fischer, 1907.

Die Geschäftsberichte des Deutschen Zentralkomitees zur Bekämpfung der Tuberkulose.

For Question 6—10.

Der Stand der Tuberkulosebekämpfung in Deutschland. Denkschrift, dem Internationalen Tuberkulosekongreß in Paris vorgelegt vom Deutschen Zentralkomitee zur Errichtung von Heilstätten für Lungenkranke. Herausgegeben von Geh. Med.-Rat Prof. Dr. B. Frenkel, Berlin 1905.

Die Geschäftsberichte des Deutschen Zentralkomitees zur Bekämpfung von Tuberkulose.

For Question 11.

Die Reichsversicherungsordnung nebst Einführungsgesetz, Textausgabe. Leipzig, C. L. Hirschfeld, 1911.

For Question 12 and 13.

Die Geschäftsberichte des Deutschen Zentralkomitees zur Bekämpfung der Tuberkulose.

Der Stand der Tuberkulosebekämpfung in Deutschland (see above).

For Question 14.

Amtliche Mitteilungen des Reichsversicherungsamtes, Beiheft 1910, Die Statistik der Heilbehandlung usw.

For Question 16.

Die Reichsversicherungsordnung nebst Einführungsgesetz (see above).

Die Deutsche Arbeiterversicherung, Merkblatt aus Anlaß der Internationalen Hygiene-Ausstellung, Dresden 1911.

Greece.

Report of Dr. Marie Kalopothakes, Arch. of Hadrian, Athens.

Statistics of the Pan-Hellenic League against Tuberculosis, 1898—1910.

Government Statistics taken in the 12 principal Cities of Greece.

Census returns, 1890—1899.

Holland.

Report: Mejuffrow. Dr. H. Schagen van Helen, Regenterseplein, Der Haag.

Official figures.

New South Wales.

Report: DR. GRACE BOELKE, Hunter's Hill, Sydney.

Statistics published by the Government of the States of Austria.

Health Officers' Report, City of Sydney.

Report of the Board of Health of New South Wales.

Report of DR. PALMER'S Government Hospital for Consumptives, at Waterfall.

Report of the Queen Victoria Homes.

New Zealand.

Information supplied by the Chief Medical Officer of Health for Otago, as published in his Annual Report.

Norway.

Report of FRU DR. MARTA PERSON, Stavanger.

Legislation with reference to Tuberculosis (Tract) Kristiania.

Report of the RITOLAI OLFENS Forlag Lyster Sanatorium for Tuberculosis, 1910. Bergen 1911.

Nos. 2, 4, 6 Meddelelser.

Fra Den Norske Nationalforening mot Tuberkulosen.

Report of the Reknaes Sanatoria, 1911.

Annual Report of the Hospital at Fredriksvaern for Scrofulous and Tuberculous Children. Kristiania, 1911.

Queensland (Australia).

Vital Statistics, 1910.

51st. Annual Report of the Government Statistician Thornhill Weedon, F. R. S. S., London. (ANTHONY JAMES CUMMING, Government Printers, Brisbane. C. A. 76—1).

Government Gazette No. 176. 31. December 1911. An Act to Amend the "Health Act of 1900". (No. 20.)

Gazette No. 155 Queensland Government. An Act to Consolidate and amend the Laws relating to Public Health (No. 9).

Leaflet: Rules for Consumptive Patients and those persons looking after them. Department of Public Health.

Report of the Diamantina Hospital for Chronic Diseases, June, 1911.

Russia.

Report of DR. ANNA SCHABANOFF, St. Petersburg.

Official Statistics taken from the Reports of the Medical Department, under the Minister of the Interior, and the Reports of Government and Private Sanatoria.

Scotland.

The 55th, 56th and 57th Annual Reports of the Registrar-General of Births Deaths & Marriages registered in Scotland during the years 1909, 1910 and 1911. Oliver Boyd, Tweeddale Court, Edinburgh, or Wyman & Sons, Ltd., Fetter, Lane, London, E. C.

A Report of the City of Aberdeen, 1910.

"Notes on Tuberculosis in Aberdeen", from Annual Report 1909, by the Medical Officer of Health (Matthew Hay, M, D., LL. D.).

Reports of the Local Government Board of Scotland on the Administrative Control of Pulmonary Phthisis in Glasgow. Oliver Boyd, Edinburgh (price 25). Published 1911.

The 17th Annual Report of the Local Government Board of Scotland, 1911. Oliver & Boyd, Edinburgh (price 1/9). Published 1912. Also previous Annual Reports of this Board.

The Public Health (Pulmonary Tuberculosis) Regulations (Scotland), 1912. Statutory Rules & Orders, 1912. No. 626/S. 16 (Price ld.).

Public Health Acts, 1875, 1890, 1897 (Scotland).

Public Health Amendment Act, 1907.

Infectious Diseases (Notification) Act, 1889.

National Health Insurance Act, 1911.

Finance Act (1911).

Interim Report of the Departmental Committee on Tuberculosis, appointed February, 1912.

Annual Reports of the Medical Officers of Health in various districts, personal interviews with Health Visitors and District Nurses, and visits of the Tuberculosis Dispensaries, several of the voluntary institutions for consumptives, and city hospitals with special wards for consumptives.

Ireland.

Reports of the Registrar General for Ireland published annually.

Reports of the Local Government Board for Ireland, published annually.

Reports of the Women's National Health Association of Ireland, published annually.

Tuberculosis Prevention Act (Ireland) 1908.

Reports of Medical Officers of Health etc.

Servia.

Report from MME. SCHAKLOVITCH, 53, Sveto Gorska Ouliza, Belgrade.

Official Statistics from DR. GEORGES f. Nicolitchy, Chief of the Sanitary Department of the Prefecture of Belgrade, and forwarded by Mme. Catherine Milovuk, President of the Servian National Council of Women.

South Africa.

Report from LADY MOLTENO.

Sweden.

Report: —

Statistics from those published by the Swedish National Anti-Tuberculosis Association.

The Struggle against Tuberculosis in Sweden. (Reprint.) Edited by Hure Carlsson, M. D., Central try Keriet, Stockholm, 1908. 91 pp.

Tasmania.

Statistics of the State of Tasmania. 1910. Part III. John Vail, Government Printer, Tasmania.

Report from MRS. HANNAFORD, The Grange, Davey Street, Hobart.

Statistics from "The Statistics of Tasmania". Published annually.

Victoria (Australia).

Report of DR. JANET LINDSAY GREIG, Brunswick Street, Fitzroy, Melbourne.

Report of a Conference of Principal Medical Officers of the States of Australia on Uniform Measures for the Control of Consumption in the States of Australia. J. Kemp, Government Printer, Melbourne.

APPENDIX D

THE INTERNATIONAL COUNCIL OF WOMEN

ORGANISED 1888

The International Council of Women is a federation of National Councils or Unions of Women that have been formed in various countries for the promotion of unity and mutual understanding between all associations of women working for the welfare of the community. The initiative in forming the International Council of Women was taken by a group of American women, who, in 1888, organised a National Council of Women in the United States of America, and invited delegates from other countries to attend a meeting at Washington for the purpose of framing the Constitution of an International Council of Women.

From that beginning, the International Council has made rapid progress, and now comprises National Councils of Women in the United States, Canada, Germany, Sweden, Great Britain and Ireland, Denmark, Netherlands, New South Wales, Tasmania, Victoria, Queensland, West Australia, Italy, France, Argentina, Switzerland, Austria, Hungary, Norway, Belgium, Greece, Bulgaria, Servia, Finland.

In accordance with the Constitution, large meetings of Council have been held every five years, called Quinquennial Meetings. The places of meeting have been Chicago, London, Berlin, Toronto, as determined on each occasion in response to invitations sent by some of the affiliated National Councils, and voted upon at the Quinquennial Sessions of the International Council. A meeting either of the Executive Committee or of the Sub-Executive (General Officers) is held annually for the transaction of current business, and these smaller meetings afford further opportunity for delegates to assemble in the various countries represented within the Council. Such meetings have been held in Germany, Netherlands, France, Austria, Great Britain, Switzerland, Sweden, and an official visit to Denmark and Norway was associated with the Executive Meeting in Sweden.

OFFICERS
OF THE INTERNATIONAL COUNCIL

for Quinquennial Period 1909—1914

PRESIDENT:

THE COUNTESS OF ABERDEEN,
Vice-Regal Lodge, Dublin, Ireland,
and Haddo House, Aberdeen, Scotland.

VICE-PRESIDENTS:

1st. MRS. OGILVIE GORDON, D. Sc., Ph. D., F. L. S.,
1 Rubislaw Terrace, Aberdeen, Scotland.

2nd. CONTESSA SPALLETTI RASPONI,
Villino Spalletti, Via Piacenza, Roma, Italy.

3rd. FRAU MARIANNE HANISCH,
Rochusgasse 7, Wien, Austria.

CORRESPONDING SECRETARY:

DR. PHIL. ALICE SALOMON,
Neue Ansbacher Str. 7, Berlin W 50, Germany.

RECORDING SECRETARY:

DR. ALEXANDRA SKOGLUND,
Brunnsgatan 4, Stockholm, Sweden.

TREASURER:

MRS. W. E. SANFORD,
Wesanford, Hamilton, Ontario, Canada.

NATIONAL COUNCILS OF WOMEN

Federated with the International Council of Women

1. **United States.** Federated 1893.
   President.—MRS. KATE WALLER BARRETT M. D., D. Sc., 408 Duke Street, Alexandria, Va.
   Secretary.—MRS. FLO JAMESON-MILLER, Wilmington, Illinois.

2. **Canada.** Federated 1897.
   President.—MRS. TORRINGTON, 12 Pembroke Street, Toronto, Ont.
   Secretary.—MRS. WILLOUGHBY CUMMINGS, 44 Dewson Street, Toronto, Ont.

3. **Germany.** Federated 1897.
   President.—FRÄULEIN DR. GERTRUD BÄUMER, Gillstraße 9, Berlin-Grunewald.
   Int. Secretary and Treasurer.—FRAU DR. ELISABETH ALTMANN-GOTTHEINER, Rennershofstraße 7, Mannheim.

4. **Sweden.** Federated 1898.
   President.—FRU EVA UPMARK, 53, Sybillegatan, Stockholm.
   Secretary.—FRÖKEN ELLEN TERSERUS, Kommendörsgatan, Stockholm.

5. **Great Britain and Ireland.** Federated 1898.
   President.—MRS. ALLAN BRIGHT, Ashfield, Knotty Ash, Liverpool.
   Organising Secretary.—MISS EMILY JANES, Parliament Mansions, Victoria Street, London, S.W.

6. **Denmark.**
   President.—FRÖKEN PALUDAN-MÜLLER, Classensgade 48, Copenhagen.
   Secretary.—FRÖKEN HENNI FORCHHAMMER, Ingemannsvej 3B., Copenhagen.

7. **Netherlands.**
President.—Mevrouw van Biema Hymans, Prins Maurits-Laan 54, 'sGravenhage.
Secretary.—Mevrouw C. A. de Jong van Beek en Donk-Kluyver, Theresiastraat 51, 'sGravenhage.

8. **New South Wales.** Federated 1899.
President.—
Secretary.—Miss Rose Scott, Lynton, 294 Jersey Road, Paddington, Sydney.

Tasmania. Federated 1899.
President.—Mrs. Henry Dobson, Elboden Place, Hobart.
Secretary.—Miss M. H. Bisdee, Elboden Place, Hobart.

Victoria. Federated 1903.
President.—Lady Fleetwood Fuller, State Government House, Melbourne.
Secretary.—Miss Michaelis, Linden, Ackland St., St.Kilda.

Queensland. Federated 1906.
President.—Mrs. J. Kingsbury, Robert Street, Toowong near Brisbane.
Secretary.—Mrs. W. H. Carvosso, Arthur Street, New Farm, Brisbane.

West Australia. Federated 1911.
President.—The Lady Edeline Strickland, Government House, Perth.
Secretary.—Miss Evie Marmion, 9 Colin Street, West Perth.

Australia.

9. **Italy.** Federated 1900.
President.—Contessa Spalletti Rasponi, Villino Spalletti, Via Piacenza, Rome.
Secretary.—Mme. Betts, Via Giovanni Lanza 135, Rome.

10. **France.** Federated 1901.
President.—Mme. Jules Siegfried, 226 Boulevard Saint-Germain, Paris.
Secretary.—Mme. Avril de Sainte-Croix, 1 Avenue Malakoff, Paris.

11. **Argentina.** Federated 1901.
President.—Señora Alvina Van Praet de Sala, 741 Calle Carlos Pellegrine, Buenos Ayres.
Secretary.—Mrs. Jean T. Raynes, 3663 Avenida Diaz Velez, Buenos Ayres.

12. **Switzerland.** Federated 1903.
President.—FRÄULEIN KLARA HONEGGER, Tödistr. 45, Zürich II.
Secretary.—FRAU E. RUDOLPH, Scheideggstr. 45, Zürich II.

13. **Austria.** Federated 1903.
President.—FRAU MARIANNE HAINISCH, Rochusgasse 7, Wien III.
Secretary.—FRAU KAROLINE VON NIEBAUER, Wien I, Naglergasse 5.

14. **Hungary.** Federated 1904.
President.—GRÄFIN ALBERT APPONYI, Verboczi út 17, Budapest.
Vice-President and Int. Secretary.—FRÄULEIN AUGUSTA ROSENBERG, II Alvinczi út 12 sz, Budapest.

15. **Norway.** Federated 1904.
President.—FRÖKEN GINA KROG, Victoria Terrasse 5, Kristiania.
Secretary.—FRU CLÄRE M. MJÖEN, Winderen, Kristiania.

16. **Belgium.** Federated 1906.
President and Corresponding Secretary.—MLLE. MARIE POPELIN, Dr. en droit, 12 rue de la Réforme, Bruxelles.

17. **Greece.** Federated 1908.
President.—MME. HÉLÈNE GARDIKIOTI GRIVA, Athens.
Secretary.—MLLE. VIRGINIA SIMOPOULA, 2 rue Métropole, Athens.

18. **Bulgaria.** Federated 1908.
President.—MME. I. MALINOFF, Uliza Graf-Ignatieff, 11, Sofia.
Int. Secretary.—MME. IRENE SOKÊROFF, 6 Septembre 30, Sofia.

19. **Servia.** Federated 1911.
President.—MME. CATHERINE MILOVUK, 17 rue Brancova, Belgrade.
Secretary.—MME. HÉLÈNE MARCOVITCH, 2 rue Danitchitch, Belgrade.

20. **Finland.** Federated 1911.
President.—BARONESS ALEXANDRA GRIPENBERG, Fabriksgatan 4, Helsingfors.
Secretary.—FRU GEORGINA LEINBERG, Alexandersgatan 42, Helsingfors.

HON. PRESIDENT AND VICE-PRESIDENTS

HON. PRESIDENT:

MRS. MAY WRIGHT SEWALL,

Former President of the International Council of Women, 1899—1904.

HONORARY VICE-PRESIDENTS

For Countries where Councils are not yet formed:

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Palais de Matchka, Béchiktache, Constantinople.

CLARE, LADY MOLTENO . . . . . **South Africa**

Ballochmyle, Kenilworth, Cape Town, Cape Province.

FRAU DR. MED. ANNA SCHABANOFF . . . **Russia**

Jukovskaiastr. 38, Petersburg.

MME. ELISE BRATIANO . . . . . **Roumania**

5 Strada Lascar Catargi, Bucharest.

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Meadowyld Cottage, Eliot, York County, Maine, U.S.A.

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MME. CHARLES D'ABBADIE D'ARRAST,
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SUFFRAGE AND RIGHTS OF CITIZENSHIP

REV. ANNA HOWARD SHAW,
Moylan, Pennsylvania, U.S.A.

EQUAL MORAL STANDARD AND TRAFFIC IN WOMEN

MME. AVRIL DE STE.-CROIX,
1, Avenue Malakoff, Paris, France.

PUBLIC HEALTH

H. E. THE COUNTESS OF ABERDEEN,
Vice Regal Lodge, Dublin, Ireland.
and Haddo House, Aberdeen, Scotland.

EDUCATION

MRS. OGILVIE GORDON, D. Sc., Ph. D., F. L. S.,
1, Rubislaw Terrace, Aberdeen, Scotland.

EMIGRATION AND IMMIGRATION

CONTESSA DANIELI CAMOZZI,
80, Piazzia S. S. Apostoli, Roma, Italy.

Each Standing Committee consists of a Convener, appointed by the International Council, and of representatives from the National Councils, one being appointed by each National Council. The work of the Standing Committees is to collect information and statistics concerning their respective subjects through their representatives in each country under the direction of their Convener. These representatives are expected to submit their individual reports to their own National Council before sending them to their Convener, who submits them to the I.C.W. Executive or Sub-Executive each year for adoption. Subsequently an abstract of the reports of the Standing Committees is published by the I.C.W. Corresponding Secretary in the Annual Report of the International Council of Women. This general Report of the work of the whole *International* organisation contains reports sent annually by the affiliated *National* Councils of Women, as well as the official reports of the International Council.

LIST OF MEMBERS
OF THE COMMITTEE ON PUBLIC HEALTH

Convener: Her Excellency the Countess of Aberdeen, Vice-Regal Lodge, Dublin, Ireland.

Hon. Secretary: Mrs. Edwin Gray, Gray's Court, York, England.

Members:

Dr. Elizabeth Hooper, Port Huron, Mich., United States;

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Frl. Dr. Med. Agnes Bluhm, Berlin-Lichterfelde, Unter den Eichen 128, Germany;

Dr. Inez Laurell, 43 u. 45 Sibyllegaten, Stockholm, Sweden;

Fru Johanne Meyer, Bulowsvej 32b, Copenhagen, Denmark;

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Mme. Alphen Salvador, 9 rue de Tasse, Paris, France;

Frau Dr. Dora Teleky, Vienna IX, Maximilianplatz 3 u. 4, Austria;

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Dr. Fru Marta Person, Stavanger, Norway;

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Dr. Marie Kalopothakes, Arch of Hadrian, Athens, Greece;

Mrs. Tchaklovitch, 53 Sveto Gorska ouliza, Belgrade, Servia;

Dr. Ellen Ahlgirst, Annegatan 12, Helsingfors, Finland;

Correspondent: Dr. Anna Schabanoff, Jukovskaiastr. 38, Petersburg, Russia.

PUBLICATIONS

OF THE

INTERNATIONAL COUNCIL OF WOMEN

Constitution and Standing Orders of the International Council of Women. (English.)
Constitution et Statuts du Conseil International des Femmes. (French.)
Satzungen des Internationalen Frauenbundes. (German.)

"What is the International Council of Women? And other Questions. With answers by its President." (English.)
Manuel du Counseil International des Femmes. (French.)
"Was ist der Internationale Frauenbund? und andere Fragen. Beantwortet von der Vorsitzenden." (German.)

Transactions of the second Quinquennial Meeting of the International Council of Women and Report of the International Congress of Women in London, 1899 (seven volumes): "Report of the Council Transactions," "Women in Education," "Women in Professions" (2 vols.), "Women in Politics," "Women in Industrial Life," "Women in Social Life." Edited by the Countess of Aberdeen. Price one shilling per volume. Apply to Messrs. Walker & Co., 19 Bridge Street, Aberdeen, Scotland.

Transactions of the third Quinquennial Meeting of the International Council of Women in Berlin, 1904, including the Transactions of the period 1899—1904 (two volumes). Edited by Mrs. May Wright Sewall. Price $ 1.50. Apply to the Editor.

Bericht über den Internationalen Frauenkongress in Berlin 1904. Herausgegeben von Frau Marie Stritt. Price 5 M. Apply to Herrn Carl Habel, 33 Wilhelmstr., Berlin SW.

Annual Reports of the International Council of Women, 1904/05; 1905/06; 1906/07; 1907/08 (one volume each). Compiled by Mrs. Ogilvie Gordon, D. Sc., Ph. D. Price 6 d each. Postage extra. Apply to the Corresponding Secretary.

"Health of the Nations." Compiled by Mrs. Ogilvie Gordon, D.Sc., Ph.D. Price one shilling, postage extra. Apply to Messrs. Constable, 10 Orange St., Leicester Sq., London W.C.

Transactions of the fourth Quinquennial Meeting of the International Council of Women in Toronto, 1909, including the National Council Reports for the year 1908/1909 (one volume). Edited by the Countess of Aberdeen. Price 3s. 6d (3 Mark; 75 cents; 3 francs 50 cent). Postage extra. Apply to Messrs. Constable, 10 Orange St., Leicester Sq., London W.C,; or to Messrs. Dodd Mead and Co., New York; or to Messrs. Copp and Clarke and Co., Toronto.

Report of the International Congress of Women in Toronto, 1909 (two volumes). Edited by the Canadian Council of Women. Price $ 2. (10 shillings.) Apply to Mrs. Willoughby Cummings, 44 Dewson Street, Toronto, Canada.

"Our Lady of the Sunshine and her International Visitors." Edited by the Countess of Aberdeen, President I. C. W. Price one shilling net. Apply to Messrs. Constable, 10 Orange St., Leicester Sq., London W.C.; or to Messrs. Copp and Clarke and Co., Toronto.

Resolutions adopted at the Quinquennial Council Meeting, Toronto, Canada. (English.)
Résolutions adoptées à la Réunion Quinquennale de Toronto, Canada. (French.)
Beschlüsse, gefasst auf der Generalversammlung in Toronto, Canada (German).

President's Memorandum on the fourth Quinquennial Meeting of the International Council, held in Canada, 1909. (English.)
Mémoire présidentiel sur la quatrième Assemblée Quinquennale du Conseil International tenue au Canada, 1909. (French.)
Memorandum der Präsidentin über die im Juni 1909 in Canada abgehaltene vierte ordentliche Generalversammluug des Internationalen Frauenbundes. (German.)

"Why should we support the International Council of Women?" (English.)

"Pourquoi nous devons soutenir le Conseil International des Femmes?" (French.)

"Warum sollen wir den Internationalen Frauenbund unterstützen?" (German.)

Annual Reports of the International Council of Women, 1909/10; 1910/11; 1911/12 (one volume each). Compiled by Fräulein Dr. phil. Alice Salomon, Corresponding Secretary. Price one Shilling.

"National Systems of Education." First Report of the Education Committee of the I.C.W. Compiled by Mrs. Ogilvie Gordon D.S.C., Ph.D. Apply to Mrs. Ogilvie Gordon, 1 Rubislaw Terrace, Aberdeen, Scotland, or the Corresponding Secretary. Price 6d.

"Women's Position in the Laws of the Nations." Compiled from special reports by the National Councils. Published by G. Braunsche Hofbuchdruckerei und Verlag, Karlsruhe i. B., Karlfriedrichstr. 18, Germany. Price M. 2.40.

Note: All publications for which no price or publisher's name is given, can be sent free of charge on application to the Cor. Secretary.